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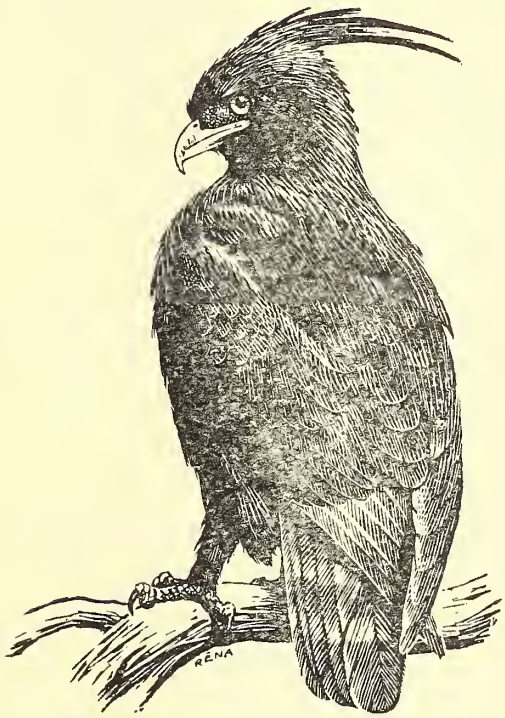

70th ANNIVERSARY YEAR

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NOTES FOR CONTRIBUTORS

Members of the Society (and non-members) are asked to follow these simple instructions when writing articles or letters for submission to the *Bulletin*. The *Bulletin* is presented six times a year in a duplicated format: the paper size is 20.5×23 cm (10×8 inches), line drawings can be reproduced but the area should not be more than 17.5×23 cm. Lettering on figures should preferably be in 'Letraset', neatly done in Indian ink or left blank: if the last method is followed, the lettering should be indicated on an overlaying sheet and should *not* be done on the figure. Figures should be prepared on good quality white writing paper and not on Bristol Board or other thick material. Whenever plants or animals are mentioned the scientific name should also be given but not in parenthesis. Trinomials should not be used unless there is good reason to do so. Author's names of species are not required.

Contributions may be typed (preferably) or written clearly and should be sent to: M. P. Clifton, Box 44486, Nairobi, Kenya. Receipt of contributions will be acknowledged.

CONTENTS

70 Years. A History 2
Congratulatory Letters to the Society 8
Annual General Meeting 9
Report on the First Annual Nairobi Bird Census 10
Incident with a *Euphorbia* 13
New Plant Records for Mt. Elgon, Kenya 16
An Unusually Heavy Puff-Adder 18
Some Observations on a Cheetah Family in the Mara 20
For Sale 22
Society Notes 22
New Members 23
Society Functions 24

70 YEARS. A HISTORY.

The Formative Years

25th March 1979 marks the 70th anniversary of the foundation of the East Africa Natural History Society. 70 years is a significant milestone in the life of a Society especially when its aim has been to promote interest in the many aspects of natural history in East Africa.

The inaugural meeting was held in the house of the Lieutenant Governor, Frederick John Jackson C.B. C.M.G. on the 25th March 1909. This was the first Society of its kind to be formed in East Africa and with the funds and skills available a group of people were gathered together who were not only interested in natural history and wanted to share their involvement, but were responsible people doing important jobs yet willing to give time to the advancement of the Society. Chairing the meeting was the Governor, Sir Percy Girouard R.E. K.C.M.G., a French Canadian born in 1867, well known as a builder and administrator of railways with special experience in Egypt and the Sudan and a man of dynamic energy. The title 'East Africa and Uganda Natural History Society' was proposed and accepted. A committee was elected, the President and Chairman being F.J. Jackson C.B. C.M.G. F.Z.S. M.B.O.U., later to become Sir Frederick. Born at Oran in 1860, he arrived in East Africa at the age of 24 and spent more than 30 years here serving as Lieutenant Governor in East Africa and Governor of Uganda until 1917 when he retired. A big game shot and naturalist of great renown whose abiding interest was bird life, he inspired respect and affection and awakened an interest in natural history in the many people he came into contact with.

The first Honorary Treasurer was C.W. Hobley C.M.G. M.R. Anthrop. Inst. A Londoner born in 1865 he arrived in East Africa as a geologist to the British East Africa Company in 1890 and was a man of many interests as his articles in the Society's Journal in future years was to show. Mr Hobley worked with great sucess in enlisting the help and sympathies of such people as Sir James Sadler K.C.M.G. C.B., Sir Hesketh Bell K.C.M.G., the Right Hon Lord Delamere and other distinguished gentlemen, who became Patrons of the Society.

At the second Committee meeting of the newly formed Society, once again held at the Lieut. Governor's house on 3rd April 1909 the draft rules were discussed and the yearly subscription set at Rs. 15. By 30th May 39 members had been elected and Col. the Hon. Theo Roosevelt and Kermits Roosevelt became Honorary Members. Mr T.J. Anderson, the first Hon. Curator had already received specimens for the proposed museum and these were stored in Mr Hobley's office. The membership figure at the end

of 1909 was 64, a satisfactory start but it was hoped more members would be elceted if the aims of the Society were to be fulfilled.

Now that a Committee was formed a building was required and plans for a museum were kindly prepared by Mr Rand-Overy; arrangements were made with Messers Jevanjee and Company to undertake the building. A plot on Sixth Avenue (now Kenyatta Avenue) was reserved and the museum was planned to be a room 30 x 25 ft for display cases with a smaller room for Committee meetings. This building became ready for occupation on 16th August 1910 at a rental of £2 10s a month. A circular was sent to members asking their help in making the museum a credit to the Society by collecting specimens and asking friends for duplicates to build up the collections. Members were also requested to send in articles of interest for publication in the proposed Journal. Interest in the Society was building up, Sir Percy Girouard R.E. K.C.M.G. D.S.O., the Governor and a patron, gave instructions to his Provincial Officers to send all duplicate heads of mammals for display in the Museum.

Mr T.J. Anderson B.Sc, Chief Entomologist with the Agricultural Department in Nairobi and the first Honorary Curator did an excellant and time consuming job preparing and cataloguing available specimens for display. To start a museum was no easy task, funds were urgently needed for display cases and to this end Mr Cherry Kearton, the big game hunter, author and photographer gave a cinematograph exhibition in the Railway Institute on 23rd June 1910. Moving pictures of East African game and birds were shown, the exhibition was well attended by members and friends. With funds raised the Society was able to order several teak display cases. The balance sheet at the end of the first year held some interesting figures judging by present day costs; i.e. Printing and stationary Rs 17, Postage Rs 4 ! Only one Journal was produced during 1910, the second was issued to members in April 1911; delays being caused because of difficulties experienced in obtaining articles from members for publication. Despite this, by March 1911 several overseas institutions and museums made exchange arrangements for the Journal and today these run into hundreds. By this time books were being donated and were the start of the very comprehensive library now in existance.

At the begining of 1911 membership had risen to 94 and a generous donation of £100 was received from Mr W.N. McMillan, a well known farmer and founder member, and £25 from Mr Gilbert Blaine; these helped in buying further equipment and furnishings for the museum. More funds were raised at a lecture by Mr McGregor Ross, the subject being 'Down the Tana River'. During 1911 it was realised that a yearly income of at least £180 was

needed, but sadly the affairs of the Society came more or less to a standstill due to the absence of Committee members on overseas leave and the pressure of business and official duties on others. Towards the end of the year there was a falling off in membership and only because of generous donations received was the Society able to carry on. The museum stock continued to build up and the remaining members of the Committee gave freely of their time in preparing and cataloguing specimens. Mr Edward Battiscombe, acting Chief Conservator of Forests in British East Africa and a member of the Executive Committee at this time proposed forming a Herbarium in the museum and members were invited to make collections in as many different parts of the Protectorate as possible. Useful hints on collecting and drying plants were given in the Journal, and from this start came a fine Herbarium now incorporated in the Herbarium in the Museum grounds in Nairobi.

Evening meetings, attended by members and their friends were held. The Hon. C.W. Hobley C.M.G., Vice-President of the Society, read a paper on the study of butterflies and much interest was shown in a lecture on Sea Fishes read by R.J. Cuninghame. Practical demonstrations in taxidermy were also given. The museum collections were growing and surely the arrival of a complete elephant skull donated by Mr H.B. Dunman must have been a great event. The ornithological collection benifited by some 900 identified birds and 500 small mammals, fish specimens and shells were received from Mr Arthur Blayney Percival, another member of the Committee. Mr Percival brought to the Society his special knowledge as a naturalist and collector. He arrived in East Africa in 1900 from Southern Arabia where he had been making a collection of the fauna. In 1899 he had been in charge of the British Museum Expedition to South Western Arabia and in 1901 became a Game Ranger in the East African Protectorate and Acting Game Warden in 1908.

1912 saw a considerable increase in membership and the Society began to recover ground lost in the previous year. Mr Cuninghame, now Honorary Curator, had devoted much time to preparing specimens but due to the volume of work waiting to be done, and his departure on long safaris, the Committee decided a full time, paid, curator was needed. To this end a deputation from the Committee called on His Excellency the Governor in October to plead for an annual grant with the result that the Legislative Council agreed to the inclusion of a sum of money in the estimates for the following year. Unfortunately, this was disallowed by the Home Authorities and caused a difficult situation as the Society could find no one who could devote the necessary time to the work of Curator.

As 1913 approached many interesting specimens, shells,

birds, snakes, insects and minerals had been received and special note was made of a Coast Bush Pig which was donated by the Officers of H.M.S. Forte. In September 1913 the Zoological Society of London approached the Society for a supply of living insects for a new insect house which was being established in the Zoological Gardens under the control of the celebrated entomologist Mr H. Maxwell Lefroy. Membership figures now stood at 120 and funds were fairly satisfactory due to lectures and lantern slide shows which were well attended by members who gave generous donations. The new Governor, Sir Charles Belfield K.C.M.G. became a Patron of the Society taking a very keen interest, helping to collect considerable funds towards a more permanent museum building and the much needed full time curator. Sir Charles had arrived in East Africa in 1912 and succeeded Sir E.P.C. Girouard R.E. K.C.M.G. D.S.O. as Governor and his help to the Society was greatly appreciated. The Society at this time was grateful for the services of three Honorary Curators, Mr T.J. Anderson B.A. B. Sc., Mr E. Battiscombe Assoc. Arbor Society and Mr R.J. Cuninghame F.Z.S. The museum building was fast becoming too small for the Society and the landlord was contacted with a view to building an extention.

The War Years: 1914 to 1918 brought about changes in the Society and because of an expected fall off in membership the proposed extentions to the museum had to be postponed. Early in 1914 Mr Arthur Loveridge of the National Museum, Cardiff in Wales was appointed as the first full time, paid, curator. Mr Loveridge, who later produced many interesting articles im the Journal and is still a keen member, could not take up his post until January 1915 due to difficulties which arose in consequence of the war. During 1914 faithful donors were still bringing in specimens and work was piling up awaiting the arrival of the new curator. Amongst the donors noted were The Rev. H. Leakey, a colobus skull, Master Louis Leakey, bats, a porcupine, birds etc and Miss Gladys Leakey, four birds. The Leakey family were of course to become very famous, not only within East Africa but all over the world for their anthropological work. A fine bronze figure of Dr Louis Leakey, M.A., Ph.D., Hon. D.Sc. (Oxon.), Hon. LL.D. (Calif.), Hon. D. Sc. (E. Afr.), Hon. LL.D. (Guelph), F.B.A., F.G.S., F.R.A.I. now stands at the entrance to The Louis Leakey Memorial Institute for African Prehistory building within the National Museum grounds in Nairobi. Mr Richard Leakey, son of Lewis is the present Director of the National Museum. During the early war years it became impossible to produce the Journal and there was no issue after Volume 4 No. 8 August 1914 until June 1916 when Vol 5 No. 9 was distributed to members. This was a sad state of affairs for the office bearers of the Society were fully aware that a Journal was needed to keep members interested.

When Mr Loveridge was able to take up his appointment as Curator in January 1915, he was faced with a vast accumulation of material at the museum and he wasted no time in starting a registration and card index system which filled twelve volumes; this proved a great help in later years. As was to be expected, the War took its toll of office bearers and members of the Society. Lieut. R.B. Woosman who had joined the Committee early in 1911 was killed in action, Dardanelles on 4th June 1915. Lieut. Woosman had served in the army in the South African War. He became known to the Natural History Museum of South Africa for a number of mammal and bird skins he had sent in, these were so well prepared that it was obvious that they were the work of a skilled naturalist. At the close of the South African War he gave up his army career and joined the South African Museum staff carrying out difficult zoological explorations through the Kalahari desert and into the Ruwenzori Range in Uganda. In 1911 Woosman was appointed a Game Warden in British East Africa and was instrumental in forming the International Conference for the Protection of Wild Animals in Africa and his plans were adopted for carrying out the object of the Conference. When he joined the Society in 1911 he collected many specimens and wrote several interesting articles in the Journal. He gave his life for his country and was sadly missed.

By the end of 1915 the number of members had fallen by only eight but despite this the Committee realised it was going to be impossible to retain the services of the Curator for another year. Capt. W.M. McMillian most generously offered to pay the Curator's salary for the following year, this was of course gratefully accepted and was the second magnificent gift received from this founder member. Mr Loveridge, who had accomplished so much during his first year at the Museum now volunteered for active service and left for the War at the end of December 1915. The Committee then engaged Mr J. Allan-Turner as Curator, he was a founder member of the Society and an active collector.

At the begining of 1916 a fund was started by Dr V.G.L. van Someren which the Committee hoped would attain such proportions as to enable the Hon. Editor, C.W. Hobley to increase the number of illustrations in the Journal but this met with little success during the War years. The Society suffered another loss when Mr John Sargent, who had been proposed as Hon. Secretary at the inaugural meeting and had given so much of his time to further the aims of the Society, was killed in a motor accident on 28th March 1916. His very efficient services were sadly missed. The Committee elected Mrs Sargent as an Honorary Life Member on the death of her husband.

During 1916 the Society was finding the rented premises on Sixth Avenue quite inadequate for the display of specimens and the Committee discussed the advisability of erecting a more

permanent Museum on a plot allotted to them by the Government, this plot was on Kirk Road. Members were circularised and asked to contribute towards a building fund. Unhappily, only a few of the 108 members were in a position to do so and due to lack of support the Society was unable to commence with their plans for a new Museum.

1917 saw several changes in Patrons and Committee members, people were still showing interest and membership rose to 221. In eight years of existance the Society had made slow but steady progress despite the continuing War with its many problems. Specimens were received, the Journal was produced while the exchange figures increased. The Library was building up slowly, reference books had been purchased but more were needed. The members list reflected wide interest in the Society, to mention a few names; Captain E.S. Grogan, a timber baron and famous for his 4,500 mile walk from Cape Town to Cairo, Captain R. Meinertzhagen, the amiable bellicose British Colonial Officer who returned to Kenya in 1914 as an intelligence officer, a controversial figure, ardent naturalist, and ornithologist of great respect. He discovered and had named after his the Giant Forest Hog, Hylocoerus meinertzhageni meinertzhageni. Deserving mention too, Mr H.M. Gardener who later joined the Executive Committee and still regularly attends lectures.

At the Annual General Meeting in February 1918 the Hon. C.C. Bowring C.M.G., later to become Sir Charles, a distinguished soldier who commanded field forces during the German East African Campaign, was voted as Chairman of the Committee and at this meeting it was agreed a letter be addressed to the Secretary of State for the Colonies pointing out the history of the Society, progress made, aims and needs and felicitating for a grant of aid. At a meeting in March it was decided to postpone this petition for six months.

At this time Mr Godfield Thomas of the British Museum had asked the Society to recommend a man who would be willing to go to German East Africa, now Tanzania, for the purpose of collecting small mammals. Mr Loveridge undertook the training and supervision of collectors while still in active service. A vast amount of material was collected for the benifit of the Society's Museum and the British Museum. Of note during 1918 was the publication of the first Special Supplement of the Journal, paid for by private subscription, on 'A Check List of the Birds of Kenya and Uganda'. At the close of the year membership had again risen and a caretaker was in charge of the 160 or more visitors to the Museum each month, Many specimens could not be displayed due to lack of space and work on a larger Museum could not commence, the building fund stood at Rs. 6,975.44, but due to rising costs much more was needed.

CONGRATULATORY LETTERS TO THE SOCIETY

Dear Sir,

Thank you very much for the notice to the National Museum and Art Gallery and the Botswana Society for the coming 70th anniversary of your Society. It is indeed no mean achievement to have survived all these years.

We would like to congratulate you most sincerely on the contribution you have made towards research in science in East Africa.

Yours faithfully, D. Nteta, Curator and Editor for Botswana Notes and Records.

Dear Mr Chairman,

I have learned with much interest that on the 25th of March 1979 the East Africa Natural History Society will celebrate its 70th Anniversary. It is thus my privilege and pleasure, as Director of the Royal Botanic Gardens, Kew to convey to you and your associates my warm and friendly greetings on this auspicious occasion.

The conservation of all forms of natural history life is very much in the minds of those who seek and strive to preserve it and, by the efforts, energy and enthusiasm of organisations such as the East Africa Natural History Society and the Royal Botanic Gardens, Kew, those who work towards this aim are united and linked in a common bond which, we earnestly hope, will never fail.

My colleagues and I send you, your Executive Committee and members, our heartiest congratulations on the achievements of your Society and our most sincere hopes for advancement in so worthwhile a cause.

With every good wish, Yours sincerely,
Professor J.P.M. Brenan, Director, Royal Botanic Gardens, Kew.

Dear Mr Karmali,

Thank you for your letter of 28th November regarding the 70th anniversary of the formation of your Society. The South Australian Museum is pleased to join with other institutions in congratulating your Society on its achievements.

I noted with great interest your mentioning the forthcoming publications on East African birds. We would indeed be glad to

receive further information when available.

With kind regards, Yours sincerely,
John K. King, Director, South Australian Museum.

Dear Mr Karmali,

I was very glad to be informed that the East Africa Natural History Society will celebrate its 70th anniversary. Indeed this is a great event. As every naturalist we are well aware of all the achievements of this Society and we have the greatest respect for all its activities in the fields of natural history and nature protection in East Africa.

On behalf of the National Natural History Museum of France I would like to carry my warmest congratulations and wishes for this world known association. We hope that we shall remain in close connection and can be sure that we shall follow your many activities with the greatest interest.

Yours sincerely, Jean Dorst, Membre de l'Institut.

Dear Colleague,

The International Council of Museums is delighted to have this opportunity of sending its good wishes to the East Africa Natural History Society on the occasion of its 70 year Jubilee celebrations. In reaching its 70th year the Society has proved both its usefulness and its tenacity. Research in the field of natural history is an important museum activity and is, indeed, playing an increasingly vital role in the light of awakening world consciousness of the urgent necessity to preserve our natural heritage.

We sincerely hope you will be able to continue and to increase your activities and that there will be many more future occasions on which we may extend our congratulations to you.

Hubert Landais, President, The International Council of Museums.

ANNUAL GENERAL MEETING

The 69th Annual General Meeting of the East Africa Natural History Society will be held on Monday 12th March 1979 in the Museum Hall, Nairobi. Nominations for Office Bearers and Members of the Executive Committee and notices of matters to be included on the agenda should be sent to the Secretary, Box 44486, Nairobi, to reach her before 19th February 1979.

REPORT ON THE FIRST ANNUAL NAIROBI BIRD CENSUS

The census of birds within the Nairobi Provincial boundaries, conducted on Sunday, 26th November 1978, proved a great popular success. A total of 62 participants in almost 40 parties participated, in spite of a miserable morning with rain and showers lasting in some places up until noon. At the end of the day, a cumulative total of 265 species and 9917 individuals had been recorded - far more than was anticipated for a first effort of this kind. More important than the number of species, however, is that we are building up a basic picture of the relative abundance of different species within the Nairobi area. Although this reflects to some extent the distribution of observers, it is nevertheless broadly representative. The complete list of species and numbers published below will be helpful not only for planning future counts, but also for beginning bird watchers who want to know how likely a given bird is to occur around the city. The purpose of the count is not to record rareties but rather to get an overall picture of the birds which normally occur.

A word about the list used by participants. It was compiled from the Nairobi master list provided by Don Turner. We wish to thank Don for this most valuable assistance. Due to pressure of time in compiling the list, a few common birds, namely the 'Placid' Greenbul (Fischer's only occurs along the Coast), Black-winged Plover and Red-tailed Shrike were ommitted from our working list. The organisers also tried to simplify matters by lumping Grey-headed and Parrot-billed Sparrows and changing the name of Apalis flavida from Black-breasted to Yellow-breasted Apalis, but this may have caused some confusion ! Any bird about which there was any doubt, improbability or question of identification has been eliminated from the list given below.

Participants were divided roughly into two groups; those who recorded the birds in their own gardens, and about a dozen parties who visited specific localities throughout the day. Each group recorded the total number of hours spent in the field and the relevant time of day. Total hours were 245, but this is naturally an over estimate. This information will be important at a later date if an attempt at standardization is made. Areas covered included Lower Kabete, Karen, Lavington, Langata, Westlands, Spring Valley, Redhill Road, Kileleshwa, Kiambu Road, Kahawa, Kariobangi, Dandora, Nairobi National Park, the Arboretum, City Park, Chiromo Campus, and the Ngong Road and Karura forests. Areas not covered included the City Centre and Embakasi. We hope to have more complete coverage next year.

Almost every group recorded at least one species which was not found by anyone else - 90 species have only one record -

for example, a Tambourine Dove, a Silvery-cheeked Hornbill and Violet-backed Starlings. A convelescent John Karmali and his wife provided us with the only Harrier-Hawk. This illustrates the value of broad participation in an excercise of this kind. The prize for the rarest bird almost certainly goes to Brian Meadows for two Grasshopper Buzzards at Dandora. Some resident but rarely seen birds included the Green-backed Twinspot and the Brown-chested Alethe. Notable 'misses' were the Yellow-billed Stork and the Red-wing Starling !

The organisers would like to thank the Hon. Secretary for producing and mailing the lists and for much needed help in compiling the results. We would also like to thank all the many people who participated, and hope that we will see you all next year. A complete list of numbers, species and participants follows.

John Gerhart and Fleur Ng'weno

PARTICIPANTS IN THE FIRST ANNUAL NAIROBI BIRD CENSUS

I.M.L. and J.P. Lane, Barbara and Richard Jackson, Priscilla White, Mrs F.M. Edwards, Mrs J. Eliot, Mr C.E. Norris, Mrs M.P. and Mr E.C. Trump, Mrs Margaret Jackson, Mrs V. Curry, Mrs C.I. Gilbert, Mr M.G. Gilbert, Mr and Mrs Visagie, J.O. Harries, I. van Someren, Mrs P.A. Larkman, Dr T. and Mrs D. Mathews, R.S. and V. Daniell, Mr G.R. Cunningham van Someren, Mrs Fleur Ng'weno, Dr K.M. Price, Miss Cecilia Muringo, Dennie Angwin, Peggy Nickalls, Susan and Simon Stagg, Anne Weale, John Gerhart, John Miskell, Mary MacLennan, Mr and Mrs D.H.M. Dempster, June Dirks, Margaret Hunt, Paul Spooner, Dr D.E. Pomeroy, B.S. Meadows, Daphne Curtis, W.J.F. Rutherford, N.J. and G.M. Skinner, Scott and Barbara Wallace, Ed Twadell, Mrs B.B. Maloba, Mr and Mrs M.G. Chase, Anne and Bryan Thomas, John and Joan Karmali, Mrs E. Angwin, Inga Ayres, Priscilla Allen, D. Backhurst, M. Keating, J. Crees.

SPECIES AND NUMBERS RECORDED DURING THE NAIROBI BIRD CENSUS

Ostrich 8; Little Grebe 18; White Pelican 2; Long-tailed Cormorant 2, Green-backed Heron 3; Cattle Egret 17; Yellow-billed Egret 11; Grey Heron 4; Black-headed Heron 28; Purple Heron 2; Hammerkop 13; Marabou Stork 27; Sacred Ibis 64; Hadada Ibis 92; Egyptian Goose 9; Spur-wing Goose 1; Knob-billed Goose 1; Black Duck 1; Red-billed Duck 65; Garganey Teal 5; Maccoa Duck 2; White-backed Duck 10; Ruppell's Griffon Vulture 3; White-backed Vulture 10; Egyptian Vulture 2; Harrier-Hawk 1; Bateleur 7; African Goshawk 5; Little Sparrow Hawk 1; Gabar Goshawk 1; Augur Buzzard 26; Steppe Buzzard 8; Grasshopper Buzzard 2; Mountain Buzzard 1; Long-crested Hawk Eagle 6; Martial Eagle 3; Tawny Eagle 4;

Fish Eagle 1; Kite 188; Black-shouldered Kite 32; Peregrine Falcon 1; Secretary Bird 4; Shelley's Francolin 13; Harlequin Quail 2; Helmeted Guinea Fowl 81; Black Crake 7; African Moorhen 5; Yellow-necked Spurfowl 9; Red-knobbed Coot 1; Crowned Crane 15; White-bellied Bustard 5; Black-bellied Bustard 3; Jacana 3; Blacksmith Plover 10; Crowned Plover 50; Ringed Plover 5; Kittlitz's Sand Plover 1; Three-banded Plover 2; Black-winged Plover 3; Greenshank 2; Marsh Sandpiper 1; Wood Sandpiper 22; Green Sandpiper 6; Common Sandpiper 11; Little Stint 375; Ruff 11; Spotted Thicknee 1; Speckled Pigeon 4; Olive Pigeon 1; Pink-breasted Dove 27; Red-eyed Dove 150; Ring-necked Dove 29; Laughing Dove 40; Tambourine Dove 1; Emerald-spotted Wood Dove 5; Lemon Dove 1; Green Pigeon 22; Hartlaub's Touraco 21; Red-chested Cuckoo 8; African Cuckoo 1; Klaas' Cuckoo 9; Didric Cuckoo 5; Emerald Cuckoo 4; White-browed Coucal 8; African Wood Owl 3; African Marsh Owl 6; Dusky Nightjar 2; Abyssinian Nightjar 2; Nyanza Swift 4; White-rumped Swift 19; Little Swift 246; Palm Swift 4; Speckled Mousebird 385; Blue-naped Mousebird 35; Narina's Trogon 10; Giant Kingfisher 2; Pied Kingfisher 1; Malachite Kingfisher 1; Striped Kingfisher 3; European Bee-eater 29; Little Bee-eater 12; Cinnamon-chested Bee-eater 100; White-fronted Bee-eater 1; European Roller 41; Lilac-breasted Roller 1; Rufous-crowned Roller 1; Hoopoe 19; Green Wood-Hoopoe 6; Abyssinian Scimitar-bill 1; Silvery-cheeked Hornbill 1; White-headed Barbet 15; Golden-rumped Tinker Bird 8; Greater Honeyguide 2; Lesser Honeyguide 2; Eastern Honeybird 1; Wahlberg's Honeybird 1; Red-breasted Wryneck 3; Nubian Woodpecker 2; Cardinal Woodpecker 7; Brown-backed Woodpecker 2; Grey Woodpecker 3; Rufous-naped Lark 44; Athi Short-toed Lark 3; Fischer's Sparrow-Lark 100; Short-tailed Lark 2; African Sand Martin 16; European Swallow 73; Wire-tailed Swallow 1; Red-rumped Swallow 34; Striped Swallow 21; African Rock Martin 47; House Martin 1; Black Roughwing Swallow 125; Yellow Wagtail 382; Mountain Wagtail 10; Pied Wagtail 29; White Wagtail 2; Cape Wagtail 2; Richard's Pipit 17; Plain-backed Pipit 1; Tree Pipit 3; Red-throated Pipit 13; Yellow-throated Longclaw 20; Pangani Longclaw 2; Grey Cuckoo Shrike 3; Black Cuckoo Shrike 7; Yellow-vented Bulbul 242; Slender-billed Greenbul 10; Yellow-whiskered Greenbul 41; Yellow-bellied Greenbul 4; 'Placid' Greenbul 38; Brubru Shrike 4; Black-backed Puff Back Shrike 42; Brown-headed Tchagra 1; Tropical Boubou 57; Slate-coloured Boubou 2; Sulphur-breasted Bush Shrike 7; Long-tailed Fiscal 20: Fiscal Shrike 243; Red-tailed Shrike 3; Stonechat 5; Wheatear 38; Pied Wheatear 24; Anteater Chat 5; Rock Thrush 2; Red-backed Scrub-Robin 4; Brown-chested Alethe 1; White-starred Bush Robin 8; Olive Thrush 120; Northern Pied Babbler 54; Great Reed Warbler 1; Lesser Swamp Warbler 3; Yellow Flycatcher Warbler 2; Moustache Warbler 4; Garden Warbler 1; Blackcap Warbler 12; Willow Warbler 11; Red-faced Cisticola 5;

Singing Cisticola 69; Hunter's Cisticola 8; Rattling Cisticola 10; Winding Cisticola 52; Stout Cisticola 10; Pectoral-patch Cisticola 10; Tawny-flanked Prinea 57; Black-collared Apalis 9; Yellow-breasted Apalis 37; Grey Apalis 9; Black-headed Apalis 1; Grey-capped Warbler 12; Grey-backed Cameroptera 44; Yellow-bellied Eremomela 1; Crombec 3; Red-faced Crombec 4; Spotted Flycatcher 2; Dusky Flycatcher 28; Pale Flycatcher 6; White-eyed Slaty Flycatcher 95; Black-throated Wattle-eye 3; Chin-spot Puff Back Flycatcher 44; Paradise Flycatcher 38; White-bellied Tit 56; Drongo 3; Robin Chat 47; Ruppell's Robin Chat 41; European Golden Oriole 1; African Golden Oriole 1; Black-headed Oriole 17; Pied Crow 80; Wattled Starling 250; Violet-backed Starling 6; Blue-eared Glossy Starling 70; Lesser Blue-eared Glossy Starling 1; Superb Starling 78; Ruppell's Long-tailed Starling 15; Red-billed and Yellow-billed Oxpeckers 3; Common White-ete 211; Kikuyu White-eye 46; Bronze Sunbird 170; Beautiful Sunbird 2; Green-headed Sunbird 2; Variable Sunbird 180; Eastern Double-collared Sunbird 15; Amethyst Sunbird 39; Scarlet-chested Sunbird 30; Collared Sunbird 67; White-browed Sparrow Weaver 1; Grey-headed Social Weaver 30; Kenya Rufous Sparrow 204; Parrot-billed and Grey-headed Sparrows 43; Black-headed Weaver 221; Speke's Weaver 70; Masked Weaver 32; Spectacled Weaver 35; Holub's Golden Weaver 62; Reichenow's Weaver 322; Brown-capped Weaver 3; Grosbeak Waever 51; Red-billed Quelea 85; Yellow Bishop 5; White-winged Widow Bird 20; Red-naped Widow Bird 227; Jackson's Widow Bird 163; Bronze Mannikin 629; Rufous-backed Mannikin 34; Green-backed Twin Spot 1; African Fire Finch 59; Red-billed Fire Finch 123; Yellow-bellied Waxbill 2; Common Waxbill 177; Crimson-rumped Waxbill 112; Black-cheeked Waxbill 2; Red-cheeked Cordon Bleu 25; Purple Grenadier 6; Common Indigo Bird 18; Pin-tailed Whydah 49; Yellow-fronted Canary 1; Brimstone Canary 1; White-bellied Canary 2; Yellow-rumped Seed Eater 45; Streaky Seed Eater 333; Thick-billed Seed Eater 8; African Citril 85; Golden-breasted Bunting 21; Cinnamon-breasted Rock Bunting 3.

Dennie Angwin

INCIDENT WITH A EUPHORBIA

On Saturday 16th September 1978 I was walking down a bush track on Ngoi Surash ridge, Mukogodo Ranch, Eastern Laikipia, Kenya at around 11.30 in the morning. The country around there is fairly thick bush, with large numbers of a particular type of Euphorbiaceae, I am not sure of the species, but they have a thick, circular stem, with a big mushroom-like cluster of branches at the top, reaching about five or six metres in height and not dissimilar to E. candelabrum. A branch of one small specimen overhang the track, I slashed at this with

my snake stick and a very small drop of the milky white sap splashed into my right eye.

I had no water with me at the time, so I began to run back towards the ranch house, which was about three quarters of a kilometre away. At first I felt no pain, although the eyelid was very sticky. After about half a minute, a dull burning pain started in the eye and increased fairly steadily. It took me four or five minutes to reach the house, and another two minutes to get a bucket of water from the well - there was no running water there. I ducked my face into the bucket, opened the eye under water, rotated it and tried to wash the sap out. To my surprise, the water seemed to have little or no effect. The pain kept increasing.

I have been spat in the eye by a Spitting Cobra (EAHHS Bulletin, July/August 1976). The pain resulting from that was a sharp, local pain similar to that caused by soap in ones eye. It was not very intense. This pain was far worse. After fifteen minutes or so I was still washing the eye and the pain was quite frightful. In addition, the sap had a disturbing effect of inhibiting the tear ducts - the eye would not weep, and even rubbing the eye had no effect. Unless artificially wetted, the eyelid remained quite dry.

About twenty minutes after the incident some milk was produced and I washed the eye out with that. Like the water it seemed to have little or no effect although I dripped milk into the eye for five or six minutes continuously.

By this time it was very difficult to keep the eye open. As far as I could tell, there had been no interference with focussing or resolving ability - when I held the eye open briefly I could still focus on near and far objects, and vision was still clear - but the eye had become extremely sensitive to light, I could not keep it open voluntarily for more than a second or two. Unfortunately, closing the eye resulted in a rapid escalation of violent burning pain, seeming to be located at the top of the eyeball.

Thence followed an hour and a half of agonising pain. The only way I could get any relief was by holding the eye open under water, but this had its drawbacks. On submerging my face and opening the eye, the pain ceased for three or four seconds, but this was followed by a sharp twinge of about two seconds duration. If I kept the eye submerged, this continued in a cyclic manner - four seconds of relief, two of pain etc. The alternative was keeping the eye shut and out of water, this was accompanied by strong, continuous burning pain. The eye still remained dry, seemingly unable to weep, and extremely sensitive

to light. It was not, however, bloodshot - a couple of quick glances in the mirror showed the white was still clear.

At around 1.30 p.m. - two hours after the accident - I took three Paracetamol and lay down with both eyes shut. The drug had a tranquilising effect, I was conscious all the time of the pain, but I was able to lie on my back and relax, something that had previously been impossible due to the intensity of the pain. Around 3.45 p.m., the pain was less and shortly after this I went into a doze. I awoke around five. The pain was much less, although still noticable. Strangely enough, if I kept both eyes shut, a constant burning pain was present, while if I kept the eye open, there was no pain for seven to ten seconds, followed by a twinge, a similar cycle to that of earlier. Also, for the first time, the eye had started to weep. It was still very sensitive to light, however - it did not want to be kept open, and even though I was in a darkened room, the eye would not stay open voluntarily for more than two or three seconds, while if I held it open, there was no increase in pain but the right eyelid made desperate involuntary attempts to shut. I lay down, with both eyes shut, and dozed again. I awoke briefly at eight - the pain was by then almost gone, the eye still hypersensitive to light. A slight pinkness had appeared on the white. I went back to sleep and had an uninterrupted night.

By morning, the whole white area of the eye was dull pink. I thought at first that the eye was still hypersensitive, as the morning sunlight was blinding. However, the eye adjusted quickly. Initially, I could see for two or three seconds before having to blink, but within ten minutes I could see for periods of ten or fifteen seconds without blinking. The eye still wept slowly, and there was a slight burning pain on top of the eye-ball. However, I went out into the sun, with a pair of polaroid sunglasses on, and by nine o'clock I had normal vision, even with the glasses off.

The interesting results of this incident were; (a) at no time had I noticed any major disturbance of vision-focussing ability, clarlty of vision and resolving power had remained unaffected. Thus it would seem that Euphorbia sap, unlike Cobra venom, does not have a neurotoxic effect on the eye; (b) the noted refusal of the eye in the early stages to weep; (c) the fierce intensity of the pain - I had only got a very tiny drop of sap in my eye - although it must be remembered that it had five or six minutes effect before I began to bathe the eye. I don't know if the sap of the Euphorbia has a necrotic effect - Cobra venom does - but its effect, as regards local pain, are far worse in my opinion. Recommended treatment for Cobra venom in the eyes is washing it out with large quantities of water as quickly as possible. I don't know what the best

treatment for Euphorbia sap in ones eye is, possibly similar first aid. Perhaps a botanist could tell me ? A medical attendant at Nanyuki Hospital was quite offhand about the affair, mearly sending me a handful of pain killers.

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NEW PLANT RECORDS FOR MT. ELGON, KENYA

In 1976 we carried out an extensive vegetation survey on Mt. Elgon. Sample plots were placed at intervals along two transect lines, one running up the Kimilili Track on the wetter South and the other up the North Elgon Track on the drier East. In addition, a few plots were situated in that part of Mt. Elgon National Park which lies close to the base of the North Elgon Track. All main vegetation types occuring between the lower forest boundary (c. 2000m) and the caldera (c. 4200m) were sampled. About 881 specimens were collected and a total of c. 400 species recorded.

According to distributions given in Agnew (1974) and Dale and Greenway (1961) the species in the following list are newly recorded for the mountain. Specimens are lodged in the Nairobi Herbarium.

Ardisiandra wettsteinii R. Wagnew (Primulaceae). Philippia excelsa thicket, Kimilili Track, 3050m; Hamilton & Perrott 76/218. Previously known in Kenya from the Aberdares and Mt. Kenya.

Carduus afromontanus R.E. Fries (Compositae). Prunus/Rapanea forest, N. Elgon Track, 3310m; Hamilton & Perrott 76/449. Previously known in Kenya from the Aberdares and Mt. Kenya.

Carduus keniensis R.E. Fries (Compositae). Tussock grassland, N. Elgon Track, 3350m; Hamilton & Perrott 76/569. This is recorded by Hedberg (1957) for Elgon; the Agnew ommission is presumably an oversight.

Cerastium adnivale Chiov. (C. octandrum Hochst. ex. A. Rich. var. adnivale (Chiov.) Mäschl) (Caryophyllaceae). Alchemilla elgonensis scrub inside the caldera, 4180m; Hamilton & Perrott 76/8. A widespread species at high altitudes in E. Africa (Hedberg 1957).

Cerastium indicum Wight & Arn. (Carophyllaceae). Tangle in very open Podocarpus gracilior/Schefflera volkensii forest, N. Elgon Track, 2650m; Hamilton & Perrott 76/524. A widely ranging species in Tropical Africa (Turrill 1956).

Conyza floribunda H.B.K. (Compositae). Tangle in very open Podocarpus gracilior/Schefflera volkensii forest, N. Elgon Track, 2650m; Hamilton & Perrott 76/537. A very common species in Kenya.

Conyza schimperi Sch. Bip. (Compositae). Short grazed grassland, Kimilili Track, 3050m; Hamilton & Perrott 76/201. A common species in Kenya.

Echinops hoehnelii Schweinf. (Compositae). Hagenia/Rapanea forest, N. Elgon Track, 3150m; Hamilton & Perrott 76/400. Previously known in Kenya from the Aberdares and Mt. Kenya.

Eriocaulon volkensii Engl. (Eriocaulaceae). Pycreus bog, Kimilili Track, 2870m; Hamilton & Perrott 76/35. Previously known from the Cherangani Hills, the Aberdares, Mt. Kenya and Kilimanjaro (Hedberg 1957).

Lobelia duripratii Th. Fr. jr. (Campanulaceae). Short grazed grassland; Kimilili Track, 2880m; Hamilton & Perrott 76/259. Widespread in montane Kenya.

Ranunculus keniensis Milne-Redh. & Turrill (Ranunculaceae). Hagenia/Rapanea forest, N. Elgon Track, 3150m; Hamilton & Perrott 76/408. Previously believed endemic to Mt. Kenya (Agnew 1973; Hedberg 1957; Milne-Redhead & Turrill 1952).

Romulea keniensis Hedb. (Iridaceae). Lake-side grassland, Kimilili Track, 4150m; Hamilton & Perrott 76/30. Previously believed confined to the Aberdares and Mt. Kenya (Agnew 1973; Hedberg 1957).

Rytigynia schumannii Robyns (Rubiaceae). Diospyros abyssinica forest, Mt. Elgon National Park, 2200m; Hamilton & Perrott 76/770. Previously known in Kenya from a few other highland areas.

Senecio petitianus A. Rich. (Compositae). Forest, Mt. Elgon National Park, 2320m; Hamilton & Perrott 76/787. Widespread in montane Kenya.

Trifolium semipilosum Fres. var glabrescens Gillett (Papilionaceae). Short grazed grassland, Kimilili Track 2880m; Hamilton & Perrott 76/262. Widespread in upland grassland in eastern Africa (Gillett et al 1971).

Many of these species are widely distributed in Kenya and our new records are not unexpected. The most interesting new species are Ardisiandra wettsteinii, Carduus afromontanus, Echinops hoehnelii, Ranunculus keniensis and Romulea keniensis. With the exception of Romulea keniensis, these were all found in high altitude broad leaved montane forest (Hagenia/Prunus/Rapanea) or neighbouring Philippia excelsa thicket. Botanists have presumably been keen to reach the fascinating, but

apparently fairly well known, afroalpine flora; in future transit stops in upper montane forest might well reveal further new records.

Finally we wish to add that Hedberg (1964) is incorrect in stating that Sphagnum is absent from Elgon. It is however, extremely rare and we did not see a single specimen in 1976. But during an earlier visit to the mountain by Mr K. Thompson and one of us (A.C.H.) in 1972 a small patch of Sphagnum was recorded in the Carex runssoroensis bog shown on Fig. 100 of Hedberh (1964). Its very limited distribution on Elgon compared with its abundance on Ruwenzori and the Aberdares is probably due to the relatively dry climate.

We are greatly indebted to Dr A.D.Q. Agnew amd Miss C. Kabuye (Nairobi Herbarium) for assistance with some of the identifications.

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A.C. Hamilton and R.A. Perrott, New University of Ulster, Coleraine, Co. Londonderry, Northern Ireland.

AN UNUSUALLY HEAVY PUFF-ADDER

On 15th September 1978, Abdillahi Boyd and I were collecting snakes on Mukogodo Ranch, Eastern Laikipia (36° 59'E; 0° 23'N), Kenya. We arrived at one of the bomas about five thirty in the evening, to be informed by one of the Samburu herdsmen

that he knew where a large snake was living on one of the nearby kopjes. From his description of the snake, I imagined it was a Python, as he said that it was as thick as his thigh, and about two metres long. He told us he saw the snake every evening, sunbathing among the rocks near the base of the kopje.

We drove down to the hill, arriving about a quarter to six. Although the sun was still shining on the rocks on the western base, we did not find the snake sunbathing in the place the herdsman had described. However, that it did sunbathe there regularly was obvious, as the rock surface between the scattered boulders was smooth and shiny from long usage.

After a fruitless hunt around the boulders at this point, we circled the kopje, also without success, but as we descended the rock on the south-west flank, one of the Somalis with us peered under a huge granite slab and shouted that he could see the snake. I peered beneath and saw a huge coil of snake. It was not a Python, however, but a Puff-Adder, Bitis arietans arietans. I put in the hook stick and pulled the snake out, not without some resistance, but as she tried to slide back (I say she, as we subsequently concluded, from her very short tail and dull colour, that she was a female) I pinned her head down, and with assistance from Abdillahi got her out from the crevice and into a bag.

Back at the ranch we measured her and she turned out to be some 1.57m (5' 2") long. Her girth was immense - I was unable to span her midbody section with both hands. We had no small pair of scales at the ranch, however on our return to Nairobi we took her to the Museum and weighed her on a spring balance, she turned the scale at 7.7 kilos (17 pounds). I suspect she was - possibly still is - pregnant, as a Puff-Adder of that weight is something unusual. Specimens of comparable size and larger have been recorded - in Pitman (1974), Snakes of Uganda, he refers to examples of 1.85 m (6' 1") and 1.80 m (5' 11") from Kenya - but nowhere can I find records of a specimen so heavy. Puff-Adders of similar size mentioned in Pitman weighed on average 2.7 - 4 Kilos (6 - 9 pounds). The heaviest Puff-Adder I find mentioned in the literature is one described in an earlier paper of Ionides and Pitman (1965) - a specimen of 1.56m (5' 1½") captured by Ionides in the Isiolo area, that weighed 5.9 kilos (13 pounds).

Another point of note is that this area of Kenya seems to breed large Puff-Adders, which is surprising, considering its high altitude (1580m). The two large specimens mentioned by Pitman - 1.85 and 1.80 m, the largest Kenya examples recorded as far as I am aware - came from the Loldaiga Hills, which are

only six or eight kilometres South of the area we were collecting. In fact, Africa's largest Puff-Adders come from Kenya, from an area stretching from Loldaiga, North to the Mathews Range, then East to Garissa. While I was at Garissa in 1970, I was informed by the Game Warden there that he had shot a very large Puff-Adder recently, and when he held the tail of the snake at head height the head was still on the ground, and the man was 1.82 m, while in George Adamson's book, Bwana Game, he describes the killing of a Puff-Adder longer than 1.82m in the Mathews Range near Wamba. In addition, several specimens brought to the Nairobi Snake Park in 1972 by John Mutui, from Ngomeni, on the Garissa-Kitui road, were longer than 1.67m.

Our specimen was deposited in the Nairobi Snake Park. It is possible that some time in the future she will give some explanation of her weight by giving birth. If so, perhaps she might match the record set by a big female Puff-Adder from Kitui, who, on the 9th December 1971 gave birth to 134 live young at the Snake Park - a world record.

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The following note has just been received from Mr Spawls :
'It has now been confirmed that the snake in question has given birth, on Sunday 19th November 1978, to 147 babies - which is a new world record '. Ed.

SOME OBSERVATIONS ON A CHEETAH FAMILY IN THE MARA

In 1977 I had been camping at Musiara in the Masai Mara Game Reserve, Kenya. The rains were just finishing and most of the Wildebeest had migrated across the Mara into the Serengeti, Tanzania. It was still very green. Many of the ungulates had young and it was a good time for the Cheetah family I had been observing - a mother bringing up her cubs. On average she made two kills a day; they were usually the size of a Hare or a young Thomson's Gazelle.

An unusual incident took place one afternoon at about 4 or 4.30 p.m. The female Cheetah had already made a kill that morning. A herd a Wildebeest had wandered into view. She suddenly sat up and watched them with increasing interest - or so I thought. As there were quite a few young in the herd, I presumed she was singling one out for her particular attention. She suddenly stood up and with a loping gait steadily ambled towards them in full view, her three cubs following some distance

behind. She then broke into a run (not her optimum speed) and the Wildebeest scattered. Another young Wildebeest added to the menu I thought, but it turned out quite differently.

The adult Cheetah had spotted a young Thomson's Gazelle in the long grass which I had not seen. When I drove up, I found her sitting on it; the Gazelle obviously frightened but otherwise unharmed. Its mother was watching the scene from a safe flight distance. When the cubs joined the mother Cheetah, they were very excited and started licking and sniffing the fawn all over, and generally playing with it as if it was another cub. The 'Tommy' did get a lot of rough treatment in the hands of the cubs while the mother kept a watchful eye on them. They would allow the 'Tommy' to run a short distance and then chase it in unision, bringing it down in a few seconds. This was valuable live experience preparing them for their adult lives and whose survival depended mainly on their hunting technique and experience. This type of play went on for about an hour and when the fawn ran too far, the mother Cheetah would go after it and bring it down. I noticed that whenever she wanted to stop the baby from getting up or running away, she would partially sit on it with her paws holding it down, keeping it imprisoned by her weight. Sometimes, the cubs would also pick the fawn up in their mouths and drag it around as they would with dead prey. At one stage the 'Tommy' even took shelter under my Land Rover but the cubs were used to the car after so many days contact, and they flushed the tired 'Tommy' out. By this time the 'Tommy' was quite exhausted and would run a few paces before being overtaken and bowled over by the cubs.

By this time the mother Gazelle had vanished and it was getting dark. It had also started to drizzle, making photography difficult as I was on the top of the Land Rover, this being the best vantage point to photograph as the Cheetah family were constantly running round the car. The mother then bit the fawn in the lower abdomen. On seeing the blood the cubs went wild and started tearing the fawn in a frenzy while still alive. The mother also participated in the meal. Within minutes there was nothing left but skin and bones.

This behaviour has been noticed in both Lions and Tigers, but whether it has been observed in Cheetahs I do not know.

Rishad Naoroji, Belha Court, Ramchandani Marg,
BOMBAY 400 139, India.

FOR SALE

Five Butterfly Boxes in good condition. Please contect :
Mrs Molloy, P.O. Box 44974, NAIROBI.

SOCIETY NOTES

The following Journals are included with this Bulletin to full, life and institutional members :
Yaninek, A Comparative Survey of Reef-Associated Gastropods at Maziwi Island, Tanzania. Vol. 31 No 165
Douthwaite, Breeding Biology of the Pied Kingfisher, Ceryle rubis on Lake Victoria. Vol. 31 No 166

Upland Kenya Wild Flowers by A.D.Q. Agnew. A few copies are still available to members at Shs. 150/-. Please contact the Secretary in the Society's office at the National Museum, Nairobi.

Birds of the African Rain Forest recorded by Stuart Keith. These two records are offered to members at a special price of Shs. 90/- a set. Available from the Society's Secretary - only a few copies remaining, so place your orders now.

A Guide to Common Reef Fishes of the Western Indian Ocean by our fellow member, Ken Bock can still be obtained at Shs. 32/- only. This book is selling very well, and is ideal for use while on holiday at the Coast. Available in the office.

1979 Subscriptions The Secretary would like to thank those members who paid their 1979 subscriptions last year. A renewal notice is enclosed for those who have not yet paid.

Annual General Meeting Do not forget that the Annual General Meeting will be held on Monday 12th March 1979 at 5.30 p.m.

The History of the Society Members will notice that the first part of the Society's history is printed in this issue of the Bulletin. All issues this year will have a few pages devoted to this interesting subject, and we hope that you will enjoy reading it.

Locality Lists Please remember that the Society has lists of birds, mammals and plants from various localities in Kenya, either in Journal form, or in a file. If you keep lists of plants or animals seen in the various parts of the country, please send us a copy for the files. Members may refer to these before going to an area - so please help us to help you.

HAPPY NEW YEAR The Chairman and all members of the Executive Committee wish you a happy and prosperous 1979, and hope that the Society will provide you with valuable information and services during the 70th year of our existance.

NEW MEMBERS

The following new members have been elected :

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Philippe Christy, P.O. Box 49675, NAIROBI

Overseas Full Members

Mrs E.M. Griffin, 81 Firswood Ave, Ewell, Epsom, Surrey, England
Dr Anne Rasa, Fachbereich Biologie/Zoologie der Philipps Universitat, Lahnberge, 3550 Marburg/Lahn, West Germany
Mr A.D. Simons, Underem Ried, 7241 Pany, Switzerland

REMEMBER APPLICATION FORMS ARE AVAILABLE ON REQUEST - JOIN YOUR FRIENDS DURING 1979.

SOCIETY FUNCTIONS

Sunday 14th January 1979 Mr Mike Clifton, Entomologist at the National Museum will lead a 'Dudu Crawl' in the Nairobi area. Please meet at the Museum at 9 a.m. SHARP, and bring a picnic lunch if you wish to stay all day.

Monday 15th January 1979 5.15 p.m. (PLEASE NOTE CHANGE OF DAY, PROGRAMME AND TIME) Mike Clifton has again agreed to help us out when we had to change the lecture. He will lead a tour round the main collections of the Entomology Dept. at the Museum, pointing out some of the insects seen on the day before. Please meet outside the lecture hall at the Museum at 5.15p.m. SHARP; and because of lack of space in the Department, please, no children.

January 27th/29th and adjoining nights Special offer - Lake Baringo Lodge, Shs. 100/- per person, per night full board. If members wish to visit this interesting area, please send your cheque for payment in full with the enclosed form and a stamped addressed envelope to Mrs A.L. Campbell, P.O. Box 14469, NAIROBI as soon as possible.

February 10th/11th 1979 Camp at Masinga area, between Thika and Seven Forks Hydro-Electric Scheme. Leaders Mr and Mrs Robin Myall. Members should be self contained with full camping equipment and food, water and petrol. The area is low-lying and anti-malaria precautions should be taken. Birdwatching and plant collecting will be the main objects of the excursion. If members wish to take part please fill in the enclosed slip and return it to Mrs A.L. Campbell, P.O. Box 14469, NAIROBI before 26th January 1979 to enable detailed instructions to be sent out in time. Please include a seperate stamped addressed envelope if you wish to also take part in the Baringo trip.

Monday 12th February 1979 At the Museum Hall, Nairobi 5.30 p.m. Lecture by Dr F. Owino, Department of Forestry at the University of Nairobi on 'The conservation status of Kenyan Forests'.

Monday 12th March 1979 At the Museum Hall, Nairobi 5.30 p.m. ANNUAL GENERAL MEETING followed by a film show.

March 17th/18th Week-end excursion to the Chyulu Hills led by Lise and Tim Campbell. More details in next Bulletin.

April 13th/16th Easter week-end excursion to Ol Lolokwe near Isiolo, weather permitting. This will be a repeat of last year's trip by request.

May 6th 1979 Day excursion to Mr and Mrs Molloy's garden and surrounding forest near Banana Hill by kind permission of Mr Gatu.

Wednesday Morning Bird Walks continue: meet at Museum 8.45 sharp.

THE EAST AFRICA NATURAL HISTORY SOCIETY

Chairman: J. S. Karmali
Vice Chairman: Dr J. Kokwaro
Editor, Jl E. Africa nat. Hist. Soc. Nat. Mus.: Mrs J. Hayes
Secretary/Treasurer: Miss D. Angwin
Ass. Secretary/Treasurer: Mrs E. B. Angwin
Librarian: Dr J. Kokwaro
Executive Committee (in addition to the above): Miss P. M. Allen, G. C. Backhurst (*Ringing Organizer*), Mrs A. L. Campbell, M. P. Clifton (*Editor EANHS Bulletin*), Dr J. Gerhart, Dr J. M. Mutinga, Dr D. J. Pearson, J. F. Reynolds.
Co-opted Members: Mrs H. A. Britton (*Nest Record Scheme Organizer*), P. Davey, M. Gilbert, Dr A. Hill, J. Maikweki, J. Miskell, M. Mukoko, Mrs F. Ng'weno, D. A. Turner.
Journal Editorial Sub-Committee Mrs J. Hayes, Miss D. Angwin, Mrs V. Balcomb, M. P. Clifton, Dr D. J. Pearson, J. F. Reynolds, Dr A. Hill.
Ornithological Sub-Committee Dr D. J. Pearson, D. A. Turner, G. C. Backhurst, Mrs H. A. Britton, P.L. Britton, Dr A. W. Diamond, Dr J. Gerhart, B. S. Meadows, J. F. Reynolds, D. K. Richards, A. D. Forbes-Watson, C. Mann (London) Dr M. Carswell (Kampala), Dr K. Howell (Dar es Salaam).
Joint Library Sub-Committee (Society representatives) Dr J. Kokwaro, Mrs J. Hayes, M. P. Clifton.
Functions Sub-Committee Mrs A. L. Campbell, Mrs E. B. Angwin, M. Gilbert.

MEMBERSHIP

This offers you free entry to the National Museum, Nairobi; free lectures, films, slide shows or discussions every month in Nairobi; field trips and camps led by experienced guides; free use of the Joint Society-National Museum Library (postal borrowing is also possible); reciprocal arrangements with the Uganda Society's Library in the Uganda Museum, Kampala; family participation: wives and children of members may attend most Society functions; one copy of the *EANHS Bulletin* every two months; a copy of each *Journal* published during your period of membership; the Society controls the ringing of birds in East Africa and welcomes new ringers and runs an active Nest Record Scheme; activities such as plant mapping and game counting are undertaken on a group basis. Membership rates are given at the foot of this page.

JOURNAL

The Society publishes *The Journal of the East Africa Natural History Society and National Museum.* Each issue consists usually of one paper, however, sometimes two or more short papers may be combined to form one number. The aim of this method of presentation is to ensure prompt publication of scientific information; a title page is issued at the end of each year so that the year's papers may be bound together. Contributions, which should be typed in double spacing on one side of the paper, with wide margins, should be sent to the Secretary, Box 44486, Nairobi, Kenya. Authors receive twenty-five reprints of their article free, provided that these are ordered at the time the proofs are returned.

E.A.N.H.S. BULLETIN

This is a duplicated magazine issued six times a year, which exists for the rapid publication of short notes, articles, letters and reviews. Contributions, which may be written in clear handwriting or typed, should be sent to The Editor (*EANHS Bulletin*), Box 44486, Nairobi, Kenya. Line drawings will be considered if they add to the value of the article. Photographs cannot be published.

SCOPUS

The Ornithological Sub Committee publishes this quarterly bird magazine. Cost: EANHS members KShs. 50/- p.a., non-EANHS members KShs. 75/- p.a. All correspondence to D. A. Turner, Box 48019, Nairobi, Kenya.

MEMBERSHIP SUBSCRIPTION RATES

Life	One payment: Kshs. 750/-
Institutional (schools, libraries) .	annual payment: Kshs. 50/-
Full Local	annual payment: Kshs. 50/-
Overseas	" " Kshs. 70/-
Junior (full-time student, no *Journal* supplied) . . .	annual payment: Kshs. 10/-

Subscriptions are due 1st January. From 1st July you may join for Kshs. 35/- and receive publications from that date. Application forms for membership are obtainable from the Secretary, Box 44486, Nairobi

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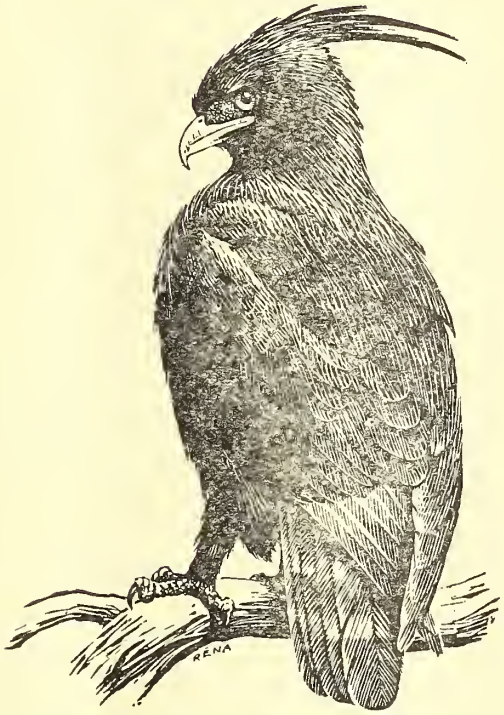
BULLETIN



70th ANNIVERSARY YEAR

A publication of the East Africa Natural History Society, Box 44486, Nairobi, Kenya. Price 4 shillings

NOTES FOR CONTRIBUTORS

Members of the Society (and non-members) are asked to follow these simple instructions when writing articles or letters for submission to the *Bulletin*. The *Bulletin* is presented six times a year in a duplicated format: the paper size is 20.5×23 cm (10×8 inches), line drawings can be reproduced but the area should not be more than 17.5×23 cm. Lettering on figures should preferably be in 'Letraset', neatly done in Indian ink or left blank: if the last method is followed, the lettering should be indicated on an overlaying sheet and should *not* be done on the figure. Figures should be prepared on good quality white writing paper and not on Bristol Board or other thick material. Whenever plants or animals are mentioned the scientific name should also be given but not in parenthesis. Trinomials should not be used unless there is good reason to do so. Author's names of species are not required.

Contributions may be typed (preferably) or written clearly and should be sent to: M. P. Clifton, Box 44486, Nairobi, Kenya. Receipt of contributions will be acknowledged.

CONTENTS

70 Years. A History 26
Congratulatory Letters to the Society 32
Joint National Museum - Wien Museum Ecological Survey of the North Nandi Forest 35
Nest Record Scheme 1979 41
Birds and Larger Mammals of Zanzibar 41
Cold Air Blow-Holes in Ngorowa Gorge 45
Some Observations on the Flowering Seasons of "Spring" Flowers in the Nairobi Area. 46
Euphorbia Sap in the Eye 48
A Weekend at Lake Baringo 48
Society Lecture Note 50
Who Knows Localities where Pied Kingfishers Breed Regularly? 51
Wanted Known 52
Annual General Meeting 52
New Members 54
Society Functions 56

70 YEARS. A HISTORY

Part 2 The Problem Years

The 6th Annual General Meeting of the Natural History Society was held in January 1919. The list of Patrons and office bearers was most impressive :

Patrons
Sir Edward Northey K.C.M.G.
Sir Robert Coryndon K.C.M.G.
Sir Fredrick Jackson K.C.M.G., C.B., F.Z.S., M.B.O.U.
Sir H.C. Belfield K.C.M.G.
Sir E.P.C. Girouard K.C.M.G., R.E., D.S.O.
Sir James Hayes Sadler K.C.M.G., C.B.
Sir Hesketh Bell K.C.M.G.

President Sir Charles Bowring K.C.M.G.
Vice President A.B. Percival Esq. F.Z.S., M.B.O.U.
Executive Committee W. McGregor Ross Esq. B.A., M.Sc. B.E. Graham Dawson Esq., F.L. Hateley Esq., V.K. Kirkham Esq. B.Sc. F.I.C. Agl., F.L. Forbes Esq., Rev. K. St. Aubyn Rogers F.E.S., E. Battiscombe Esq. Assoc. Arbor Soc.
Honorary Treasurer H.C.E. Barnes C.B.E.
Honorary Secretary Dr V.G.L. van Someren L.R.P.C.&S., L.R.F.P.&S., M.B.O.U., C.M.Z.S. etc
Curator A. Loveridge Esq. C.M.Z.S., F.E.S.
Honorary Editor Rev. K. St. Aubyn Rogers F.E.S.

The war was over and the Society was faced with many problems, but hopes were high and so was the desire to improve facilities for all naturalists, amateur as well as professional, but this was not to be. Activities in 1919 and 1920 were curtailed for financial reasons, there were vast arrears in subscriptions, several committee members were on leave and vacancies were difficult to fill. The Journal was still being printed in England at substantially high production costs. However, the Committee agreed that the standard should be maintained as the Journal was the only return many members received from their subscription and they also realised its value in exchange with other scientific publications. Mr Loveridge returned to Nairobi in August 1920 and resumed his duties as Curator. The Society was unable to promise continued employment and he later joined the Game Department in Tanganyika. During his period of office he rearranged the entire collection of Reptilia. He was later to become well known as an authority on the snakes of Africa. An appeal to the Government for funds to meet the cost of a curator was unsuccessful. Efforts to keep the Society going was an uphill struggle and a great challange to the Committee and its faithful members.

1921 marked a period of transition in the affairs of the

Society and the closing months of the year could be looked upon as the real starting point of its activities as an institution worthy of its place with other scientific bodies of the world. For a long period the rented building on 6th Avenue had proved far too small for the proper display of exhibits. The Committee reached agreement that all funds available for building should be devoted to the erection of the first block of a permanent museum on the Society's plot on Kirk Road (opposite the present All Saint's Cathedral). Arrangements were made with contractors, Messrs Harrtz and Wood to this end. Funds were not sufficient to fully meet the cost of building and these two gentlemen generously advanced the difference at ordinary bank rates. Mr T.A. Wood joined the Society in 1921, he had many commercial interests in Kenya and was an established member of the Nairobi Municipal Council.

Construction was put in hand during July 1921 and was sufficiently advanced by November to allow the transfer of some of the collections. A helpful donation at this time was of all the sand and lime needed in the construction by Mr Hutchinson, a member of the Society and by the manager of the Equator Saw Mills who provided the necessary timber at a reduced rate.

Mr A.F.J. Gedye acted as curator during this period and put in much work on the collections of insects; Mr Harger gave his services for a month helping to move exhibits and rearrange them.

The Society was still without government recognition though there was little doubt that the museum could become a teaching centre and therefore should receive state aid. Government departments were using the collections, especially the Medical Dept. who was determining the distribution of plague-spreading rodents. The Society had been unable to issue a Journal during 1920 and in 1921 only a Journal of reduced bulk without illustrations was published, a matter of regret but it was necessary to keep the cost within the limits of the funds available. Journal No. 16 of 1921, though small in size, contained several interesting articles including 'On a Collection of Birds from Turkanaland' by Dr van Someren and part one of 'Notes on East African Mammalia' by Mr A. Loveridge. Part two of this work was published in Journal No. 17 of 1922.

The official opening of the new museum and the 8th Annual General Meeting took place in February 1922, His Excellency Sir Edward Northey G.C.M.G. performed the ceremony. Sir Edward, a distinguished soldier who had commanded the Nyasa-Rhodesia Field Force during the German East African Campaign, had arrived in Nairobi early in 1919 to face the task of reconstructing the economic ravages of the war. Chairing the meeting was the President of the Society, Sir Charles Bowring, and it was attended by

45 members and friends. The history of the Society was outlined and the museum declared open to the public. Members were given free entry and the general public were to be charged one shilling admission. The expectations expressed at the formal opening of the new museum, that with this aim achieved, the progress of the Society would be more rapid, did not materialise. Because of the drain on revenue due to the repayment of the debt on the new building, construction of urgently needed fittings and furniture, and the employment of a permanent curator were out of the question.

At the opening of the museum the Governor had referred to the Society as one worthy of government and municipal support, but by 1923 this was still not forthcoming. The Society and its museum existed but could not progress. Several members of the committee undertook the duties of Honorary Curator and did considerable work, but many specimens were damaged or destroyed for lack of proper preservation and storage. Many more were still being received and although some of the costs of preservation and mounting were met by generous donations, these were not adequate. The Society was in financial difficulties but continued to labour on until such time as it would receive recognition and more public and government support. The Honorable C.W. Hobley C.M.G. who had worked so tirelessly for the Society since the inaugural meeting in 1909 left Nairobi in 1923 and was voted an Honorary Life Member for his services.

An editorial in Journal No. 20 of November 1924 stated that some members had expressed regret at the size and infrequency of the Society's publication. Again only one Journal had been issued in 1922 and nothing in 1923. This was not because of lack of funds alone, members showed a marked reluctance in sending the editor articles for publication. The Committee therefore decided to ameliorate this, the Journal should be produced more frequently, and to this end it was agreed to print it locally, thus reducing costs, and every effort would be made to produce it at quarterly intervals. The Forest Department in Nairobi was begining to show more interest in the Society and requested space in the Museum to exhibit samples of local timber; the Committee was willing to agree to this provided the govermnent paid for any necessary fixtures. It was felt such an exhibit would be of interest to members and the general public.

Present at the Annual General Meeting in 1924 was His Excellency Sir Robert Coryndon who had acquired a great reputation in Africa and who had spent most of his life in colonial administration. His inspiration was drawn from Cecil Rhodes with whom he had served in South Africa, for some time as his Private Secretary. The meeting was attended by some 50 members, Mr Battiscombe, as Chairman, announced the death of Mr J. Peniham Cook. He had been a respected member of the Committee from 1913

and his death brought a sense of deep loss. Discussed at the meeting were ways and means of increasing the revenue of the Society and it was agreed that a special supplement be published, to include a brief outline of the Society's activities and an appeal for financial support. The Honorable E.B. Denham, who had been elected as Joint Vice President of the Society at this meeting and Mr R.F. Mayer, O.B.E., director of the East African Standard Ltd., generously offered to pay for the printing and postage of 500 copies of this supplement. Membership cards were to be printed to enable members to gain free entry to the museum. A fresh card was to be issued each year on payment of subscription and this practice continues today. Mr Mayer again showed his generosity by offering to pay for the cost of the cards. Mr Martin Johnson, the famous game hunter, author and photographer, was elected an Honorary Life Member as was Dr V.G.L. van Someren whose work as Honorary Secretary, Curator and Editor had helped the Society so much.

Progress during 1924 was slow but steady with an improvement in the finances of the Society, the most noteworthy being the final settlement of the debt for the museum building. This was mainly due to the accession of a special fund resulting from the exhibition of a big game film presented to the Society by Mr Martin Johnson, which proved to be a useful sorce of revenue for years to come. At the first showing of the film the Society was greatly honoured by the presence of Their Royal Highnesses The Duke and Duchess of York who were in Kenya on a two months' visit. Several Government officials, members of the Diplomatic Corp and members and friends also attended, a successful and memorable evening was enjoyed by all.

An advance in the development of the museum was the degree of government recognition secured during the year. At the invitation of the Governor, Sir Robert Coryndon, the Committee approached the government on the subject of a grant. This appeal was sympathetically considered and resulted in a sum of £150 being included in the estimates of the year and approved by the Colonial Office.

During 1924 the British Government sent a parliamentary commission of three to report on the co-ordination of policy and administration in East Africa and a further indication of Sir Robert's interest in the Society was the ready response to the suggestion that the museum should be visited. Sir Robert himself conducted Major Church, a member of the commission, over the museum, fully explaining the difficulties under which the Society was labouring. Major Church was extremely interested and promised to advance the claims of scientific work in Kenya. Following this visit attempts were made to organise the scientific workers, both government and private, to draw up a memorandum outlining

the great need for research and the desirability of increasing the government staff and making provisions for services not yet provided for. The memorandum was submitted to the Commission and to His Excellency. To establish a great central scientific institution, of which the museum would form a part, was the goal towards which the Society pressed. Sir Robert died suddenly in December 1924, he had been a popular Governor and had given a lifetime of service in and for East Africa.

Activities were somewhat restricted in 1925 and were confined to improving the exhibits in the museum. The whole of Sir Robert Coryndon's collection of game heads was presented by Lady Coryndon and these duly took pride of place in the museum. The Society also received an interesting pair of tusks from a dwarf elephant thought to be new to science. Public health propaganda films on malaria and hookworm were loaned to the Society by the Zanzibar Government. These films were exhibited in Nairobi and arrangements were made with the medical department to show them in various towns throughout the country. A mosquito survey of Nairobi town had been carried out in 1924 and as a result the museum acquired a named series of fifty or more species known to breed within the municipal boundries, this was of great interest to the Society's members.

Shortly after the death of the late President of the Society, Sir Robert Coryndon, a meeting of representatives of public bodies was called to discuss the feasibility of establishing a memorial to commemorate Sir Robert's sterling services to the country. It was decided that the memorial should take the form of an addition to the museum building to be known as the Coryndon Hall. A public appeal for funds was launched and an Executive Committee formed on which the Society was represented. The fund was brought to the notice of members of the Society in the hope that they would subscribe generously to a project which would commemorate the late President and also enhance the utility of the museum.

Early in 1925 the Society was presented with a bronze bust of Captain Frederick Courtenay Selous, a big game hunter and a naturalist, who had made a wide collection of specimens of African flora and fauna. A writer, giften musician and fluent in several languages, of him President Roosevelt said,

"there was never a more welcome guest at the White House then Selous".

He was killed by a sniper's bullet during the German East African campaign. The bust was a gift presented by Sir Northrup McMillan and was unveiled by him shortly before his death. Sir Northrup, to whom the Society had been so often indebted, was a prominent pioneer who at his own request was buried on the summit of the hump-backed Ol Donyo Sabuk near Thika. 1925 also saw the publication in the Journal of part one of The Birds of Kenya and Uganda

by Dr V.G.L. van Someren and part one of The Butterflies of Kenya and Uganda by the same author and the Rev. Cannon K. St. Aubyn Rogers. This was the begining of a long felt want for a 'handbook' on the birds and butterflies of the territories. Of the Birds, Vol. 1, parts 1 to 7 were published between 1925 and 1928 while Vol. 2, parts 1 to 5 were printed between 1933 and 1935. The Butterfly series was published between 1925 and 1927. These were acclaimed by many overseas institutions and are sought after by collectors today.

At the Annual General Meeting held in 1925 a resolution was passed 'That the Committee and members are in favour of legislation being introduced by government empowering the Governor, by proclaimation, to declare definate close seasons for game birds'. A start to the protection of wild life in the country !

The Society was grateful to learn that the government had increased its grant from £150 to £200 during 1926, this was spent on furnishings for the museum. Four Journals were published in 1926, their cost was very high due to the number of half-tone plates in the 'Birds' and 'Butterflies' series and unfortunately, the special illustrations fund set up some years before had received little support. Several collections of interest had been studied and named by Prof. Poulton, Hope Professor of the Hope Department of Entomology, Oxford, and Dr Karl Jordon, Lord Rothchild's private curator at Tring Museum, both very eminent entomologists. This material was incorporated in the Society's collections. The desire to build up a comprehensive herbarium had not been achieved, lack of funds made it impossible to employ a botanist. During 1926 important exchanges of journals and other publications were arranged with scientific societies in America and elsewhere and reference books were donated by some members. Expenditure was equal to income but there was no money in reserve. Membership was steady at just under 250.

At this time Dr L.S.B. Leakey had been carrying out valuable research work in connection with prehistory in Kenya and his discoveries were of extreme anthropological and ethnological importance. Work was also done by a Swedish geological survey team who had found a complete fossilised buffalo in the Morandat area which was of much zoological interest. Dr Parkinson, collecting in Kenya on behalf of the British Museum, found rich deposits of fossils at Koru. Regretably most of the material collected was taken out of Kenya. The Society felt that such work should be encouraged and that by the giving of government grants, through the Society, some of the material collected, or their exact replicas, could be secured for the museum and the country as a whole.

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CONGRATULATORY LETTERS TO THE SOCIETY

Dear Mr Karmali,

It is with pleasure that we note that your esteemed Society will be 70 years old on March 25th, 1979. We have received your publications regularly for many years and we are convinced that these fill a void which would have otherwise existed by not reaching the interested layman (and professional) on matters pertaining to Natural History in the broadest sense of the word. May we wish you continued growth and may your Society maintain and improve the encellence of standard with which the EANHS is synonymous.

Yours sincerely, Dr G. De Graaff, Assistant Director: Scientific Liasion, National Parks Board of Trustees, Pretoria, South Africa.

Dear Mr Karmali,

I was happy to get your letter and to note that you will celebrate your 70th anniversary of the 25th of March.

Allow me to congratulate you and your colleagues, and to extend the felicitations of the Bombay Natural History Society on your 70th anniversary, and our good wishes for the future.

We look forward to seeing your new publications when they come out.

Yours sincerely, Salim Ali, President.

Dear Mr Karmali,

In occasion of the 70th anniversary of the East Africa Natural History Society the Gesellschaft Naturforschender Freunde zu Berlin, as the oldest German Society of Natural History, wishes to express its congratulations.

May the East African Natural History Society flourish and make further progress in the promotion of Natural History !

Prof. Dr. H. Strubing, Chairman.

Dear Mr Karmali,

On the occasion of its 70th anniversary it gives me great pleasure to send the East Africa Natural History Society the good will of this Association.

The part played by Societies such as your own in the developing countries of the world cannot be overestimated. Not only

do they bring together keen naturalists, they also provide a standard of acedemic excellence and collaboration that is of fundamental importance for the development of any country. It is fitting that as part of your anniversary you should be producing two such important books on the East African bird fauna. With fisheries and marine biology in their relative infancy in Kenya, a Kenyan Marine Fauna would be an invaluable addition to your anniversary volumes in future years.

With very best wishes from the Marine Biological Association of the United Kingdom on the occasion of your Jubilee.

Yours sincerely, E.J. Denton, Director and Secretary to Council.

Dear Sir,

I wish to congratulate you and your Society, on behlaf of the National Museum of Natural Sciences of Canada, on the occasion of the 70th anniversary of the East Africa Natural History Society.

The East Africa Natural History Society ranks very highly among world institutions of its kind. Certainly you, your Executive Committee and your members must be very proud of your achievements over the last 70 years.

My colleagues at the National Museum of Natural Sciences join me in wishing you and members of the East Africa Natural History Society a happy anniversary celebration in March.

Yours sincerely, Louis Lemieux, Director.

Dear Mr Chairman,

Congratulations to your Society on its 70th birthday. Your long record of active interest in the natural history of East Africa is to be commended.

We look forward to the appearance of your two major publications in 1979 and to many further contributions to natural history in the years to come.

Yours sincerely, Dr M.K. Seely, Director, Desert Ecological Research Unit, Walvis Bay, South West Africa.

Dear Mr Chairman,

It gives me great pleasure to send my own good wishes and those of the University, to the East Africa Natural Hisotry Society on the occasion of your Society's seventieth anniversary. The University had received copies of the Journal of the Society

since 1910, and I know that your affairs are followed with great interest.

Please accept my congratulations on this auspicious occasion.

Yours sincerely, Alan Cottrell, Vice Chancellor,
University of Cambridge.

Dear Mr Karmali,

We are delighted to learn that the East Africa Natural History Society will shortly be celebrating its 70th birthday and send out warmest congratulations on past achievments, coupled with good wishes for the 30 years leading up to your centenary.

Particularly in the field of migration studies of Palaearctic species it has become increasingly apparent that work in Africa is as important as work in Eurasia. The contribution of the East Africa Natural History Society in these studies has been invaluable: would that there was a similar history of study in the west African winter quarters.

Warmest good wishes, Yours sincerely, Robert Spencer,
Director of Services, British Trust for Ornithology.

Dear Mr Karmali,

On behlaf of the Council of the Malayan Nature Society, and its ten State Branches, I would like to extend our warmest congratulations and best wishes to the East Africa Natural History Society on the occasion of its 70th anniversary on 25th March 1979.

Our own Society is only 38 years old and still growing. Hopefully, we too will one day attain the stature that you have achieved. We look forward to continuing contact and exchange with you.

Yours sincerely, Dr. Salleh Mohd. Nor, President.

We hereby convey our sincere congratulations on the occasion of your 70th anniversary and our best wishes for a prosperous future.

Scientists in the natural history field from our university take a great advantage in the cooperation with naturalists from East Africa, as they have done in the past and hope to have opportunities to do so in days to come.

Martin H:son Holmdahl, Rector Magnificus
Carl-Olof Jacobson, Dean of the Faculty of Science,
Uppsala University, Sweden.

JOINT NATIONAL MUSEUM-WIEN MUSEUM ECOLOGICAL SURVEY

OF THE NORTH NANDI FOREST

The North Nandi Forest lies on the top of the Nandi Escarpment at an elevation of around 2,133 m (7,000ft) and some 300 m above the nearby Kakamega Forest, Kenya. The forest is approximately 25 km long and some 6 km wide at the widest (South) point but only 2 km at the North end. Its southern edge is some 11 km from Kapsabet.

As this forest has not been subject to any intensive collecting the flora, including the trees, and fauna are virtually unknown. In 1976 a long narrow strip of forest along the escarpment on the West was set aside as a Nature Reserve, really a water catchment reserve, and this was finally gazetted in 1978. The rest of the forest is scheduled to be destroyed and replanted with exotic pine trees to provide pulp for Wabuye mills in some thirty years time. The Nature Reserve is some 20 km long and between 1 and 2 km wide, in all 3,434.4 ha in area.

Since the flora and fauna were unknown and much of the indigenous forest doomed together with the fauna, the National Museum Nairobi, felt it was essential that an ecological survey be undertaken before it was too late. Wien (Vienna) Museum was interested in the project and agreed to sponsor part of the cost of a five to six week survey.

Dr Herbert Schifter, ornithologist, and his wife came to Kenya to represent Wien Museum while the National Museum Nairobi was represented, for short periods at a time, by Issa Aggundey (Mammalogist), M.P. Clifton (Entomologist), Alex Duff-MacKay (Herpetologist) and the writer as Ornithologist. Logistic support and junior staff were provided by the National Museum.

The North Nandi Forest has been logged over to extract the economic timber species and of course, it is now degraded while the local people cut poles and take out other forest products. Thus the economic species are now hard to find and we did not see a specimen tree or sapling of these species. In extracting the logs many other trees are felled to provide a pathway and these have been left to rot. It was difficult to walk in any direction in the forest without stumbling over a log.

Many fine trees, some over 30 m high still remain, and we were struck by the fact that many were very straight boled and clear of branches almost to the canopy. Better trees were located in the steeper valleys where extraction was obviously too difficult. Having walked much of the terrain it is surprising that clearing of such steep slopes could even be contemplated even if these were

to be replanted with pines. The system whereby squatters are permitted to clear the forest and plant maize for a year or so before tree saplings are planted we feel will undoubtedly lead to erosion.

Undergrowth consisted of dense stands of the very prickly Acanthus arboreus or the Brillantaisia. Here and there we found tall Dracaena but these were more numerous in the southern portion of the forest where the wild banana was also plentiful. Creepers were relatively scarce when compared say with the Kakamega Forest, while ferns and mosses were poorly represented. Trees along the swamp margins such as at Chemisia were loaded with epiphytic orchids of many species. One family of plants particularly struck the author and this was Malvaceae which was represented by many species even down along the streams and tracks, the majority, however, were not true forest species.

Botanically we felt the area to be rather poor with relatively few species except by the streams. The cover of Brillantaisia being so dense probably inhibited the growth of many other species, however, we feel that given support, an enthusiastic warden could make a very attractive Nature Reserve in the forest which teemed with monkey troops, Red-tailed, Colobus and Blue 'Sykes', and three species of squirrel including the Giant Squirrel.

An early survey of the area undertaken by MacKay and van Someren suggested that if the weather was wet, then only the track through the forest from Kipsamoite to Kamwega would be passable to a lorry and four-wheel drive. Other tracks we found impassable to the Land Rover. Camp was therefore set up on the Kamwega track on 6th November 1978 by MacKay who was joined a few days later by the Schifters and van Someren. The safari was fortunate as the weather and track dried and only a few days with rain were experienced.

Our objectives were numerous, we were to collect everything, plants, insects, snakes, frogs, mammals, birds, snails, earthworms - the lot.

MacKay and his assistant, Peter Kamenyia were soon out searching for frogs in the many pools and puddles along the track. Nets, polythene bags and a tape recorder was their equipment. Recording the frog's voice and then playing it back would often induce the caller to show himself and so permitted its capture. Some frogs were in the pools, others hid in the grass, according to the time of day and degree of sunlight. At other times hunting was carried out along the seepages and small forest streams in the steep valleys but this was often undertakes at night. MacKay would disappear after supper armed with torches, tape recorder, nets and poly bags. Like birds, frogs can be identified and

located by their calls. Captured frogs required special treatment as specimens, and this would take up a good deal of MacKay's time, setting them in formaline and then transferring to alcohol followed by labelling and recording the specimen.

Rain was what the frog hunters wanted as this caused the creatures to be active, but rains did not suit the rest of us for no insects were about in it and taking birds from wet mist nets or searching for a shot bird in wet dense undergrowth was no joke.

Joseph Kwambai, mammal trapper and skinner, was involved in looking for suitable places to set his traps, baiting them and then placing them in the forest and along the road. Small rodents were taken in small live box traps baited with peanut butter while bird bodies were used as bait in the larger wire cage traps. Carting the traps around was quite a job and Joseph had to remember just where he had set 72 traps ! These had to be inspected regularly but it was usually the overnight settings that produced the animals for most were nocturnal species.

Animals required as voucher study specimens were painlessly put to sleep. Then came the next set of tasks, weighing and measuring. Measurements were made of the total length, tail, hind foot and ear. All this was recorded on the label together with the sex of the specimen. Newly killed animals were pricked to obtain a small blood sample for a smear so that the blood could later be examined for parasites. Next the animal was inspected for ectoparasites - fleas, lice, mites and ticks - these were collected and stored in vials of alcohol.

Larger animals like the mongoose or genet cat were examined in more detail for the presence of internal parasites such as worms and to determine the food items taken. In many cases after skinning the entire skeleton was preserved for the Museum's Section of Osteology and here we made use of Nature's small scavengers, the 'Siafu' or 'Safari Ants', Dorylus sp. The carcases were placed in cages near ant trails and the ants would swarm over them and clean up the bones in no time.

Talking of ants, Dr and Mrs Schifter became 'blooded safariers' when their tent was raided by 'Siafu' in the small hours of the morning, not a pleasant experience when camping out in the forest for the first time, however, help was at hand and with a few puffs of pyrethrum the invasion was checked and repelled. Cecilia Muringo, assistant to the author, suffered a like invasion of her tent a few days after arriving in camp.

Lizards were required. These were looked for under fallen logs, rocks, in the brushwood, leaf litter and bases of the wild banana while others were shot with minute cartridges as they

sunbathed on tree trunks. Local children were invited to help and they brought in some good examples including the blue-headed Agamid which we much wanted for the collections. Lizards and chameleons were placed in alcohol and had to be set prior to storage. We made blood slides from these lizards and also found several to be heavily parasitised with worms which, of course, we kept and preserved.

Snakes were a problem - a real problem - but this was on account of the fact that there appeared to be no snakes in the North Nandi Forest ! The Museum snake specialist carried out intensive searches but with no result. At Kimondi, outside the forest, we found a sloughed skin, so there was still hope but it was little Wambua, a skinner, who turned up trumps when he brought in a specimen of Lichtenstein's Viper, Causus lichtensteinii. This poisonous species proceeded to lay six long oval soft-shelled eggs. Egg laying by the genus Causus is unusual as most species are viviperous. Later, in December, Wambua brought in a fine Forest Cobra, Naja melanoleuca, nearly 4 m long - this is now in the Snake Park.

While these chaps were busy with their work, the Schifters and the author were at the mist nets. Series of nets were set along the existing trails in the forest while similar trails had to be cut through the dense undergrowth in other parts of the forest. We tried to cover as much area and types of habitat as possible. Nets were usually set for three days and then removed and placed elsewhere. Birds developed a shyness but it was necessary to leave the nets for this time so that we could catch 're-traps' - that is birds that had already been caught and ringed. Such re-traps indicated that there was little movement of birds as they seemed to remain in a territory. Nets had to be inspected regularly, and this meant considerable walking from set to set, back to camp to record the captures then out again for another round. Captured birds were weighed and the colour of the iris, bill and legs was recorded. Birds to be ringed were kept in cotton bags, then ringed and recorded before release. Others required as voucher specimens were taken back to camp for recording and examination for parasites and a blood slide prepared. Some 40 nets were in use every day and over the period of five weeks nearly 1000 birds were handled.

Some birds naturally had to be shot particularly those that frequented tree tops and were thus unlikely be be caught in the nets. Here again great care had to be taken as it was essential that before shooting we had to ascertian that the specimen could be recovered from the thick undergrowth. We usually had one of the villagers alongside to act as a second and covering pair of eyes to follow the falling bird, then we had to plunge in and locate it. Blood smears had to be made at once before the clot

congealed. Many birds carried a strange flat fly, Hippoboscidae, as a parasite. These live among the feathers and move around very rapidly so are difficult to capture and apparently impossible to squeeze to kill them; getting them into a vial of alcohol was quite a tricky operation !

We used the tape recorder quite a lot with pre-recorded calls and by this means we ascertained that the Broadbill, Smithornis capensis was in the forest though we never saw one; it would answer our tapes very readily. Another bird that eluded us was the White-spotted Crake, Sarothura pulchra which answered the tape, not one bird but often three or four would call, and sometimes from only a metre or two away. Despite many nets set around and in the forest swamp we could never catch one. We tried to tape the rare Red-chested Owlet, Glaucidium tephronotum, but it defeated us and always seemed to call while we were around the camp fire having supper. By the time plates were dropped and parabola and microphone set up it was too late. A strange thing about this little owl is that we proved that it also hunted by day for we captured one in the mist net at 10.30 in the morning where it was eating one of the captured birds. This net had been inspected after 8.30 and emptied of birds.

Digging for earthworms was the responsibility of Edna Oxtoby who joined us for a few days. Despite much digging in the forest loam and litter not a worm was found. However, she was more successful at the seepages, stream edges and amongst the rotting leaves at the base of the wild banana, Ensete ventricosa.

As the base of a banana leaf holds water and forms a breeding and living site for frogs and other aquatic fauna, we searched these. No frogs, but we made a good collection of mosquite larvae which we kept in jars to pupate and then collected the adult mosquito. All mosquitos coming into the mess tent were captured and a special chloroform bottle was kept on the mess table for this purpose. Of interest however, was that most of those tent invading mosquitos were swamp breeders yet the nearest swamp was several kilometres away. How did they find their way through the forest to feed on us ? On a huge, fallen log we found a small pool of stinking water which was hatching with huge mosquito pupae. We collected these which produced huge mosquitos almost the size of the 'daddy-long-legs' or Crane Fly.

Insects were collected by netting, hunting under logs and catching them on bushes and trees oozing sap. The Malaise Trap was set on a forest path and took numerous specimens. Any insect flying down the path comes up against a netting screen and it gradually flies upwards to an opening, but alas at the end there is a jar of killing fluid. This lazy way of insect collecting was useful for night insects. Mike Clifton searched for butter-

flies and moths though these were disappointing, however, he did get a single example of a species hitherto unrecorded from Kenya.

There was no peace for the wicked and no early to bed when Issa Aggundey was in camp for he was after night animals. After supper we went hunting. This was a four to five man job. Firstly a driver for the Land Rover and a man sitting on the bonnet with a powerful spot light which he swept over the trees looking for tell-tale eyes. Another man with the shot gun and a torch who would endeavour to shoot the animal, and most important were two men ready to plunge into the dark and dense bush to recover the fallen body, armed only with small hand torches. By this means we ascertained that the forest held Potto, Perodicticus potto, Nandi Cat or Two-spotted Palm Civet, Nandinia binotata, and the Flying Squirrel, Anomalurus derbianus jacksoni. We also found a so far undetermined species of Galago. All these are nocturnal animals, and of interest was the fact that the Nandi Cat had been feeding exclusively on fig fruits, surely an unusual diet for a cat.

We did not find the 'Nandi Bear', the 'Chemoset' or 'Kerrit' but we did have a strange animal round the camp one night. We had had a very fine piece of Tilsiter cheese for supper and as it was a bit 'high' could not keep it in the tent so we left it on the table outside. This two kilogram round was gone the next morning without a trace.

We searched for the rare Otter Shrew, Potamogale velox but failed, but we did find freshwater Crabs in the streams so maybe another time we shall be lucky - Potamogale feeds on crabs.

To end up, we broke camp on 16th December and returned to Nairobi. Our little expedition has thrown much light on the flora and fauna of that section of the North Nandi Forest; there are other parts of it we intend to explore. We have extended the range of several species of flora and fauna and we have some idea of the population and density of the birds and mammals and their breeding seasons. Now we hope that as a result of our findings we can pursuade the powers that be that more of the indigenous forest should be saved and added to the all too small Nature Reserve.

Technical notes and papers on the results of this joint ecological survey will appear later in appropriate publications.

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NEST RECORD SCHEME 1979

I would first of all like to thank all those contributors who have sent in a regular supply of Nest Record Cards during 1978, their spontaneous efforts are very much appreciated.

Please would all contributors send in their used cards for 1978 (or earlier) so that I can work on a report for this period as soon as possible. Last year was one of exceptional rainfall in parts of East Africa and should have been a good year for breeding activity, although many nests under observation may have suffered from too much rain. Some colonial breeding species characteristic of more arid areas (eg. Wattled Starling and Quelea) appear to breed very sporadically except in years of heavy rainfall. I would like to encourage members who have notes from safaris into the drier areas, where there are no resident bird-watchers, to fill in cards for any observations they have (however scant) on breeding activity of all species.

In November, the Executive Committee of the EANHS agreed that NR cards would in future be supplied to members FREE of charge. Cards are available from the EANHS office and the Bird Room at the National Museum, Nairobi, or by post from me at the address below. When ordering cards by post it would be appreciated if stamps to cover the cost of postage are enclosed, but this is by no means obligatory and I will despatch cards to any member as soon as requested.

I hope that 1979 will be a year of success and happiness for all contributors and that we can persuade many new members to join in this worthwhile activity of the EANHS.

Hazel Britton (Organiser), EANHS Nest Record Scheme,
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BIRDS AND LARGER MAMMALS OF ZANZIBAR

Before moving to Zanzibar in 1975, I obtained a copy of 'The Land Vertebrates of Pemba, Zanzibar and Mafia' by R.E. Moreau and R.H.W. Pakenham. This 1941 study was my guide to Zanzibar's birds and larger mammals during the year and a half I lived there and is a useful reference with which to compare my own observations.

Birds Moreau and Pakenham generally confined their list of Zanzibar's birds to year-round residents. Excluded were the

Palaearctic migrants, sea birds and the rich variety of shore birds, all of which add much to the volume and diversity of Zanzibar's avifauna. From MacWorth-Praed and Grant it is possible to obtain a good idea of what can be expected to occur in these categories.

It seems to me that there are at least six candidates to be added to Moreau's and Pakenham's list of 102 Zanzibar residents. This would include the Yellow-billed Egret, Egretta intermedia, Sulphur-breasted Bush Shrike, Malaconotus sulphureopectus, African Fire Finch, Lagonosticta rubricata, and the Yellow-fronted Canary, Serinus mozambicus. Another species, the Harlequin Quail, Coturnix delegorguei, was thought to be a migrant by Moreau and Pakenham. There was a place near Zanzibar Town where at least two could always be found and I am inclined to think the species is resident. More precise information is available on the Senegal Plover, Vanellus lugubris, also put down by Moreau and Pakenham as a Zanzibar migrant. In October 1976 I found an adult (almost certainly a female) at a nest containing one nestling on recently burned ground.

The Eastern Bearded Scrub Robin, Erythropygia quadrivirgata greenwayi, which occurs in Zanzibar, should be substituted in Moreau's and Pakenham's list for the Bearded Scrub Robin, E. barbata, which, according to MacWorth-Praed and Grant, is found in southwestern Tanzania.

Of particular significance to Zanzibar's avifauna is the introduction of the Indian House Crow, Corvus splendens. From the Crow's point of view this has been a great success; from that of the native bird life it has been an unqualified disaster. The Indian House Crow was brought to Zanzibar in the early 1890s. By one account, British authorities in Zanzibar who moved in after it was declared a British Protectorate in 1890 were shocked by the filth , and decided to bring the Crow from India which was a useful scavenger there. In another version, as recorded by Major Pearce, it was "originally imported from India, it is said, by the Parsees for local towers of silence which they proposed to build; the erection of these towers was forbidden by the reigning Sultan when he learned to what use the birds were to be put, and Zanzibar was left with its Indian Crows".

Pearce observed that "The large black-and-white African Crow (Corvus scapulatus, now known as the Pied Crow, C. albus), so common in the country districts, seldom dares to enter the town, having been driven out by its Indian cousin". MacWorth-Praed and Grant wrote that "Fortunately it is preeminently a town bird and is not likely to disturb the balance of nature far afield in the countryside, but it has extended its range to most of the larger villages on the Island of Zanzibar".

The Indian House Crow is now found almost everywhere in Zanzibar. The Pied Crow population has been reduced to a few pockets on the eastern shore and it appears headed for extinction. The Indian House Crow is a voracious raider of nests for eggs and nestlings. I have seen a flight of several fledglings doomed from the onset by the presence of several of these alert predators. In twos or threes the Crows attack smaller birds on the wing, as well as species of Bats, Chiroptera sp., and in many such encounters I never saw them miss.

It may be hoped that some effort will be made to eradicate this nuisance. I was told that the last big anti-crow drive was in 1972, with arms and ammunition issued as needed by the government. A little later that year Revolutionary Council Chairman Abeid Amani Karume was assassinated and, according to the story, superstition holds that it may have been a result of the attack on the Crows. Whether true or not, the Crows continue unmolested save for the futile efforts of furious chicken farmers who regularly suffer losses from Indian House Crow raids.

The African Black Kite, Milvus migrans has been almost completely forced out along with the Pied Crow. The Drongo, Dicrurus adsimilis, described by Pearce as "common", is now quite difficult to find. I wonder if some of the birds listed by Moreau and Pakenham have not already been eliminated. The Zanzibar race of Fischer's Turaco, Tauraco fischeri zanzibaricus, for example, proved completely elusive and was unknown to people living near its most likely habitat.

Larger Mammals As indicated by Pearce, Zanzibar does not teem with wild animals. This may be even more so now than in Pearce's day, although several species of larger mammals are still evident.

The Thick-tailed Galago, Galago crassicaudatus is perhaps the most conspicuous wild animal in the vicinity of Zanzibar Town. It is comfortable in a suburban environment, and uses the roofs, and sometimes the interiors, of houses in its territory. The smaller and greyer Zanzibar Bushbaby, Galago senegalensis zanzibaricus, is much less often seen.

The Blue Monkey, Cercopithecus mitis albogularis, is the common monkey of Zanzibar and it can be found almost anywhere. A few Black-faced Vervet Monkeys, Cercopithecus althiops are also found but this species does not occur naturally. Individuals have been imported as pets from Pemba and the mainland and some have escaped.

Kirk's Red Colobus, Colobus badius kirkii is the most celebrated of Zanzibar's larger mammals. Its stronghold is in the ground water Jozani Forest, where it is easily seen, but it also

occurs in southeastern parts of the island. Pearce reported it as rare, which perhaps remains an apt description, but Kirk's Red Colobus appears to be in no imminent danger. It is protected and Zanzibar's television station periodically airs a lengthy program describing the Red Colobus and urging islanders not to interfere with it.

Among carnivores, the Slender Mongoose, Herpestes sanguinens is most likely to be seen. The individuals I saw in Zanzibar were a striking, rich rufous colour. This same colouring occurs in the Red-tailed Coast Squirrel, Paraxerus palliatus, a resident in our garden at Mazizini south of Zanzibar Town. Similarly coloured, and an occasional garden visitor was the Giant Elephant Shrew, Rhynchocyon cirnei.

Zanzibar's largest carnivore is the Leopard, Panthera pardus, which is largely confined to the bush of the coral rag country in the south and southwest but including the Jozani Forest. The Zanzibari Leopard is relatively small in size and light coloured and the rosette pattern of spots is at a minimum. I saw several skins at the state shoe factory, where I was told that the police annually kill about three or four leopards to deminish predation on the goats and cattle herded on the coral rag. I have no information on the number of Leopards in Zanzibar or whether the species is holding its own.

The African Civet, Viverra civetta, appears to be fairly common, especially where it can make a living on domestic fowl. Supernatural qualities are associated by Zanzibaris with this species and the known presence of one leads to talk of ghosts.

Zanzibar's two antelope species, the Suni, Nesotragus moschatus, and Zanzibar Duiker, Cephalophus adersi, are both called "dik-dik" and equally esteemed for the contribution they make to the pot. I never saw either in the wild. One or the other, or perhaps both, are considered fairly common but it proved difficult to elicit a distinction between one "dik-dik" and another "dik-dik". Historically, the Suni has been the more numerous. Small, skinned antelopes are not infrequently seen for sale in the Zanzibar market. They are referred to as "dik-dik", but are the Zanzibar Duiker or Suni, or both.

Omitting the Bats, Chiroptera and most of the rodents Rodentia, there are three other interesting species which one might hope to see in Zanzibar. The Red-legged Sun Squirrel Heliosciurus rufobrachium undulatus occurs at least in Jozani Forest. The Bush Pig, Potamochoerus porcus, is well established in the forest, which is criss-crossed with numerous Bush Pig runs. The Tree Hyrax, Dendrohyrax validus occurs, but is apparently rare.

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COLD AIR BLOW-HOLES IN NJOROWA GORGE

At the present entrance to Hell's Gate on the Njorowa Gorge, Naivasha, Kenya and on the left of the track stands a tall pinnacle of rock or commendite lava plug known as Fischer's Tower, Dr G.A. Fischer was the first European to travel through the Njorowa Gorge in 1883.

Facing the tower from the track, proceed to the left side where, at the base, two air blow-holes in amongst the fallen rocks will be found. These air blow-holes expel cold air with considerable force causing all the nearby vegetation to waver and tremble.

Thompson and Dodson (1963) mention a similar air blow-hole about .8km on the Eburru side of the intersection on the Lake circuit and the Eburru Road. They wrote, "these holes draw in air during the night, expelling it during the day. The expelled air is cold and Spinks (1945) reported a temperature of 59°F as against the local shade temperature of 80°F".

Incidentally, the Rock Hyrax of the pinnacle are exceedingly confiding and readily took paprika potato chips from the hand !

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SOME GENERAL OBSERVATIONS ON THE FLOWERING SEASONS OF "SPRING" FLOWERS IN THE NAIROBI AREA

Nairobi, being almost on the equator, is not supposed to have clear-cut seasons. And yet when good long rains come in April and the grasslands are spangled with wildflowers in May, there is only one word to describe it : "spring".

Over the last few years I have noted the flowering times of some of the showy "spring" flowers in grasslands in Nairobi in my spare time. The following is a general and brief summary of my observations.

The area looked at is grassland in the Langata and Nairobi Hill sections of Nairobi. This includes grassland on red soil, black cotton soil and rocky outcrops.

The species I have concentrated on belong to four families, all monocots : Liliaceae, Amaryllidaceae, Iridaceae and Hypoxidaceae. There are, of course, many other "spring" flowers !

At first I tried to make detailed notes on the rains, and the time elapsed between rain and the first flowering of a species. With pressure of work and very unseasonal rains I had to abandon this detailed study. The following observations are therefore of a more general nature.

Hypoxidaceae: After every heavy rain, the Yellow Star Grass, Hypoxis villosa and H. obtusa puts out leaves and flowering stalks. Hypoxis in Nairobi therefore flowers after every major rain, seasonal or unseasonal. If the rain continues, Hypoxis produces more flowering stalks, and continues to flower. This is true for H. villosa and H. obtusa as a group. Because Hypoxis are small and abundant, I have not been able to measure whether each individual plant flowers after every rain. Hypoxis flowers in Nairobi usually open between 7 and 9 a.m. On a very cloudy day, or in the shade, they may stay open all day. In the open, in sunshine, Hypoxis flowers start to close at midday.

Amaryllidaceae: Two showy species, the Pyjama Lily, Crinum mocowanii (formally C. kirkii) and the lovely pink Ammocharis tinneana, flower erratically after each heavy rain. Both usually produce leaves at the same time; the leaves wither in the dry season. A week or two after each major rain, seasonal or unseasonal, one is likely to find some Crinum and Ammocharis in bloom, and more in leaf. But what stimulates an individual plant is unclear.

If a long dry season is followed by good rains, then many Crinum and Ammocharis will flower at once. But the erratic rains

we have had lately have produced erratic flowering. One plant may flower three times a year. Another may not flower at all. Crinum macowanii flowers in Nairobi open in the late afternoon. They have a rich, spicy fragrance. The pink and white flowers stay open for a day or more, depending on the weather. Ammocharis tinneana flowers in Nairobi are creamy shell-pink and fragrant when they open. The next day they are shocking pink, and then they turn darker and begin to wither.

Liliaceae: There are many Liliaceae that flower in the rainy seasons, and my observations are very incomplete.

Generally, it seems that most Liliaceae flower in the true rainy seasons, that is, April - May and November. Some Urginea and Albuca species seem to flower just before the rains, presumably triggered by the first showers. Unseasonal heavy rains may cause some Liliaceae to put out leaves; but rarely flowers.

There seem to be more Dipcadi viride in flower in the November rainy season than in the April-May season. Many Liliaceae have open flowers all day. Anthericum gregorianum flowers open about 11 a.m. Trachyandra saltii, Eriospermum triphyllum and Chlorophytum tordense flowers open after midday.

Iridaceae: The three members of this family I have seen in Nairobi, Gladiolus ukambanensis (Acidanthera candida), Gladiolus natalensis (G. psittacinus) and Moraea thomsoni, all seem to have an inner calendar.

The large orange gladiolus and the beautiful iris-like Moraea put out leaves in the long rains, and flower in July-August. M. thomsoni is particularly striking, as the leaves and flowering stalks are so slender that they are hardly noticeable. In August, one may walk through a field of dried red-gold grasses and see nothing else; walking through the same field after 3 or 4 p.m. the grass is spangled with blue six-pointed stars - the flowers of M. thomsoni.

The wild white gladiolus, G. ukambanensis, is by its sheer numbers the most showy of Nairobi's "spring" flowers. Part of Nairobi Hill and Nairobi National Park are snowy with white gladioli about six weeks after the start of the long rains. Each waxy, fragrant flower lasts several days. Most wild white gladioli leaf out and flower in the long rains. Some put out leaves in November; a few also flower. But the plant is not fooled by freak rains. The rains in January 1979 fooled a lot of us - termites swarmed, birds nested and farmers wondered what to do. But Gladiolus ukambanensis did not grow.

The quantity and quality of "spring" flowers in Nairobi

seems to be related not only to seasons but also to the condition of the grass. It is an endless competition between creeping grass and drought-resistant flowers. Where grass has been burned, heavily grazed or withered by a long dry spell, the flowers will bloom better.

All the flowers mentioned in the above article are described (amd most of them illustrated) in Upland Kenya Wild Flowers by A.D.Q. Agnew. My thanks to Christine Kabuye and Robert Faden, who identified so many plants for me, and encouraged me to begin these observations.

Fleur Ng'weno, P.O. Box 42271, NAIROBI

EUPHORBIA SAP IN THE EYE

In answer to Mr Spawls' query in the January/February 1979 Bulletin, I would suggest the following treatment for Euphorbia latex in the eye.

Wash out thoroughly with water and then apply Lignocaine (Xylocaine) eye drops which will anaesthetize the eye for a few hours, repeating until the pain has lessened. The eye should be covered with a pad to prevent injury while anaesthetized. Amethocaine or Cocaine eye drops would have the same effect, but are incompatible with alkali. I do not know the chemical composition of Euphorbia latex.

Dr Nigel W. Nicholson, P.O. Box 259, MBEYA, Tanzania.

A WEEKEND AT LAKE BARINGO

The recent EANHS trip to Lake Baringo was a joy in every respect. For one thing, it was warm, in contrast to Nairobi's unseasonable cold. In all, 25 members took advantage of the Lodge's special offer, some for two nights, others for three.

It was some years since my last visit and in the interim, partly due no doubt to the current wet cycle and the resultant rise in the lake, the gardens have become a riot of colour. We should have counted the varieties of bougainvillea; perhaps the next batch of visitors will do so, in April or May. The swimming pool is another amenity since my last visit, much appreciated both by returned bird-walkers and indolent lotus-eaters.

The birds were the great attraction, and our pleasure in them was enhanced by the enthusiasm and knowledge of Terry Stephenson, the Lodge manager. Terry, an ex-Warden of RSPB reserves in

Yorkshire, accompanied the dedicated on a walk in the cliff area in the morning, and along the Lake shore in the evening. In all, my Kenya list was enlarged by ten 'life' birds.

Along the cliffs the Bristle-crowned Starling, Onychognathus salvadorii was in evidence; and we had excellent views of a Shikra, Accipiter badius, both perched and in flight, which should in future help those of us who find birds of prey difficult to identify. A most exciting sighting was of a single Reef Heron, Egretta schistacea (now known as E. gularis asha)in the lake edge area south of the Lodge, where it arrived early in November. It's usual habitat is along the shores of the Red Sea. This appears to be the first sighting for inland Kenya, though there have been, in the past, unconfirmed reports of it from the north coast. Though at first glance it may be readily confused with the Little Egret, Egretta garzetta, it is distinguished by its orange-yellow bill, and there seemed also to be subtle differences in relative body proportions. This bird had partially grey plumage, colour phases or forms (which has always seemed to me a preferable term), being a common feature in many herons.

Another highlight was the spotting by one of the party, eagle-eyed but fortunately not eagle-intentioned, of a Great Spotted Cuckoo, Clamator glandarius. We had good views on two occasions as it perched in a lakeside shrub and flopped from one to the next.

Botany was not entirely neglected on this trip. A key to the Acacias was much in evidence, and a number of specimens were identified; while other members of the party set off in search of succulents. Several more paid a visit to Jonathan Leakey's snake farm.

During a lakeside walk, I picked up several pieces of ambatch, Aeschynomene elaphroxylon, the shrub which grows along the lake margins and which the local people use traditionally to make canoes and fishing floats. Until a few years ago a canoe from Baringo was on display in the Nairobi Museum, the interesting thing being that in its design it was almost identical to those used on some Ethiopian lakes, a fact reflecting the history of Africa's peoples and their migrations.

Someone remarked that it would be interesting to know how ambatch compared in weight with balsa wood, and possessing a tortoise made of this, from the Galapagos Islands, I rashly offered to investigate. No longer having ready access to a chemical balance, not a calibrated measure large enough to take my tortoise and register its displacement, my findings can hardly be considered definitive, and I should like to say no more than that ambatch is considerably lighter than balsa,

possibly of the order of 15 times. Dale & Greenway, I see, state that a cubic foot of ambatch, air dry, weighs 10 - 11 lbs, and that it is lighter than cork.

Let me conclude with what for us was the highlight of our visit, the sight of a Standard-wing Nightjar, Macrodipteryx longipennis, in the Lodge garden, silhouetted in flight against the twilit lake. Seduced momentarily into thinking we had seen the Pennant-winged, M. vexillarius, - it sounded somehow, so much more appropriate a name - a glance at the field-guide soon put us right. It had indeed looked like three birds flying in formation, the two 'standards' readily "mistaken for two small birds flying above and behind the nightjar". That sight alone would have made the Baringo visit well worthwhile.

Joan Karmali

Editorial Note: While checking the latin name of the ambatch, it was pointed out by Mr Jan Gillett of the Herbarium that Aeschynomene elaphroxylon is not known to occur at Lake Baringo. The plant which is there (and also at the coast) is A. cristata Vatke, var pubescens J. Leon. After many years Mr Gillett has had numerous specimens sent to him from Lake Baringo, but they have never been true ambatch. The distribution of elaphroxylon seems to be confined to fresh water, such as Lake Victoria and along the Nile; Baringo seems too saline for it. Jonathan Leakey records that he has seem stems of cristata up to 10 cm which would be quite wide enough for boat building though elaphroxylon grows much thicker. Both species are known as ambatch.

SOCIETY LECTURE NOTE

For the February 1979 lecture, Dr F. Owino of the Department of Forestry at the University and Chairman of the Forest Working Group of the E.A. Wild Life Society, gave us an illustrated talk on the conservation status of Kenyan forests.

He started by explaining the facts and figures of the forests stating that about 30% of the country was suitable for agriculture and that of this about 2 million hectares, or in other words about 2.5% of the country was under forest. About 70% of the forest grows in very large blocks, like that around Mount Kenya and the Aberdares, and these are quite well protected. The other 30% of forests are in small blocks and are kept by the Forest Department as water catchments. Due to lack of manpower, these forests could not be given the protection they need, and the only hope is to educate the local people living round them to grow quick-growing trees for fuel and leave the proper forest.

To illustrate his points, Dr Owino used the example of Endau Forest, 75 km north of Kitui, which was nearly gazetted as a forest in 1964 but at the time it was thought to be safe. The local people in the forest were moved out in 1948 but in 1968 it was given back to the County Council and the people moved back. Now large areas of the catchment, particularly along the rivers, have been destroyed and a shifting system of agriculture is being practised as the soil becomes exausted. The result of this is that the streams are silt-laden right back to the source.

To finish a really fascinating lecture, much of which has had to be left out of this write up due to lack of space, Dr Owino explained how the Forest Working Group is using satellite photographs. With these, destruction to forests of as little as 0.6 ha can be seen. The satellite crosses the country every 18 days, and so a check can easily be made on critical areas. Dr Owino showed two maps illustrating forest destruction, one of the Aberdares where encroachment could be seen in black in the south-east and the other of Mount Kenya where much more extensive destruction was shown around the town of Meru.

Our thanks go to Dr Owino for giving us such an interesting evening, and we hope he will soon return with more information on the forests of Kenya.

M.P.C.

WHO KNOWS LOCALITIES WHERE PIED KINGFISHERS BREED REGULARLY?

During my studies of various kingfishers in Kenya (see Scopus 2 (3), 1978) I compared two breeding colonies of the Pied Kingfisher Ceryle rudis with one another with respect to ecology and social structure. From my results I concluded that Pied Kingfishers are adapted to different ecological conditions by having a flexible helper structure (Reyer, in prep.)

However, to test this hypothesis more data are needed from as many other places as possible. It would be of great help to me, if readers who know localities with regularly breeding Pied Kingfishers would send me a short note until April 1979. Please indicate date of observation and make descriptions of localities as precise as possible by adding geographical coordinates or a simple drawing showing how to get there. Though I am especially interested in breeding colonies, information about single pairs will be valuable too. Tnank you !

Dr. Heinz-Ulrich Reyer, Kingfisher Research,
P.O. Box 33, NAKURU, Kenya

WANTED KNOWN

Tick Off Bird Lists The Section of Ornithology and Mr Bruce-Miller are compiling a fold-out tick-off list of birds of Kenya. These will be available for a small fee hopefully in March. Please contact the Bird Room at the Museum, or the Society's office, both of which will be selling the cards.

Special Supplement Wanted Urgently needed, 'The Acraea Butterflies of East Africa' by R.H. Carcasson, E.A. Natural History Society Special Supplement No 8. 1961. Please write to Mr P. Markham, P.O. Box 14764, Nairobi (telephone Redhill 254)

Cottage Available to Members Mrs G.A. Carnegie, Ngobit Estate, Private Bag, Naro Moru writes,:
"A fully furnished cottage is available to members free of charge. It had a bathroom and WC, one double room with double bed, one sitting room with fireplace and a fully equipt kitchen with gaz stove. Electricity supplied by generator. Visitors would have to bring their own bedding (pillows and matresses supplied) and food. Milk and eggs could be bought on the farm and some vegetables. The only payment would be to the servant who would clean up the cottage and the gardener for cutting firewood. We are at 7,100 ft, so it can be cold. There is a wide range of bird and mammal life and at the moment the dams are full. Tarmac all the way from Nairobi - go through Nyeri out on the new Nyeri/Thomson's Falls road and the entrance to Ngobit Estate is 56 km from Nyeri on the left side of the road. I would suggest that to book you send a reply paid telegram to Carnegie, Private Bag, Naro Moru, giving dates and ETA, and length of stay. We are not on the telephone."

ANNUAL GENERAL MEETING

The 69th Annual General Meeting of the Society will be held in the Museum Hall, National Museum, Nairobi on Monday 12th March 1979 at 5.30 p.m. Members are urged to attend this important function. After the business meeting there will be a film on the bird life of Lake Nakuru.

SOCIETY NOTES

Membership Cards It had been brought to the notice of the Executive Committee that some members are not showing their membership cards when entering the Museum or the Library. All members are requested that this is done, particularly when signing a book out of the Library. I'm sure we can have your cooperation in this matter.

Birds of the African Rain Forest. These two records by Steuart Keith are still available to members at a special discount price of Shs. 90/- per set. Please contact the Secretary in the Society's office to obtain your records - very well worth while.

A Guide to Common Reef Fishes of the Western Indian Ocean by Ken Bock are still on offer to members at Shs. 32/- each. Are you planning a holiday at the coast ? This book will prove to be part of your essential equipment. Available in the office at the National Museum, and at some lectures.

1979 Membership Renewals Thanks to all those who have paid - over 400 to date - but more are needed ! Please remind your friends that the Society exists if they are not already members, and encourage those who have not yet renewed to do so.

Informal Notes These attractive notelets, specially designed for the Society by Mrs Jean Lock are still for sale in the office at Shs. 10/- per set of 12 cards with envelopes - air mail weight.

Copy Wanted Are you enjoying the Bulletin ? During our 70th year we are trying to include as many articles on general natural history subjects as possible. Only you can help by supplying these articles, so please put pen to paper and send in your observations to Mike Clifton, Hon. Editor, Bulletin, P.O. Box 44486, Nairobi. Look forward to hearing from you !

Library Opening Hours The Library is now open on Saturday mornings from 9.30 a.m. to 12 noon. I hope you will take advantage of this. During the week the hours are 8 a.m. till 5 p.m.

Journals Needed Due to a short print, we still need copies of Journal numbers 160 and 161, on 'Breeding Sites of some species of Zaprionus in Uganda' and 'Marabou Stork Leptoptilos crumeniferus Breeding Colonies in Uganda'. We would be most grateful to receive any copies members may not require.

Special Society Trip to Madagascar Interested ? Please see the enclosed slip for details.

Aloes of Tropical Africa and Madagascar by G.W. Reynolds. Thanks to Mr Jan Gillett, the Society has been able to obtain a limited number of copies of the superb 1966 book. Cost to members, Shs. 190/-. Please place your orders now with the Secretary to avoid disappointment.

Bulletin Covers There was a gremlen at our printers last year which resulted in the Bulletin covers being delayed. As a result, we had to use old covers for the January/February issue - our

apologies for this. We now have the correct ones, and a spare copy of these new white covers is enclosed for all those who did not receive them.

Lectures It has been noticed that some people regularly arrive late for lectures. Please try to get there on time, as it is very disturbing for our lecturer when members keep trooping in !

Posters are still available free of charge to members who can stick them up. Please ask the Secretary for them.

Annual General Meeting Do not forget - Monday 12th March 1979 in the National Museum Hall, Nairobi at 5.30 p.m.

Application Forms are in the office, please make your friends join, fantastic value for money.

NEW MEMBERS

The following new members have been elected :

Local Full Members

Ms Tenna Abel, P.O. Box 30261, NAIROBI
Mrs M. Beaudin, K.T.T.C., P.O. Box 44600, NAIROBI
Mr J. Blackwell, P.O. Box 137, NANYUKI, Kenya
Mrs Joan Bolt, c/o P.O. Box 30577, NAIROBI
Ettore Botta, P.O. Box 14316, NAIROBI
Mr D.F.B. le Breton, P.O. Box 30465, NAIROBI
Mr E. van Breukelen, P.O. Box 21410, NAIROBI
Dr Stephen Cobb, Dept. of Zoology, P.O. Box 30197, NAIROBI
Mrs J. Copland, P.O. Box 30481, NAIROBI
Maureen Dougherty, P.O. Box 41017, NAIROBI
Mr A. Duff-MacKay, Section of Herpetology, P.O. Box 40658, NAIROBI
Mr and Mrs Rudel Egli, P.O. Box 29053, KABETE, Kenya
Henry Foy, P.O. Box 14336, NAIROBI
Patty Gagnon, P.O. Box 30766, NAIROBI
Miss D. Gardner, P.O. Box 666, NYAHURURU, Kenya
Mrs J. Goldberg, P.O. Box 40751, NAIROBI
Dr H. Grossman, c/o KCMC, Private Bag, MOSHI, Tanzania
Mrs June Harvey, P.O. Box 44679, NAIROBI
Ingrid Hoffmann, P.O. Box 14596, NAIROBI
G.L.T. Hunt, P.O. Box 25294, NAIROBI
Allan Jaques, P.O. Box 30000, NAIROBI
Mrs A. Johnstone, P.O. Box 44934, NAIROBI
Mr and Mrs D.H. Jones, P.O. Box 40598, NAIROBI
Dr David A and Mrs Kohler, Management Science Dept., P.O. Box 30197, NAIROBI

Athena Kondi, P.O. Box 14336, NAIROBI
Mrs Thusnelda M.J.V. Roll, c/o P.O. Box 14369, NAIROBI
Frank A. Ledwidge, P.O. Box 44719, NAIROBI
Mrs V. Loefler, P.O. Box 24556, NAIROBI
Gayle Mascho, P.O. Box 44600, NAIROBI
Miss Elizabeth Migongo, Ecosystems Ltd., P.O. Box 30239, NAIROBI
Miss Joyce Moseti, c/o Anders Floren, P.O. Box 30596, NAIROBI
Bradley Nelson, S.D.A. Med. Service, P.O. Box 48629, NAIROBI
Mr Murage Ngatia, P.O. Box 47146, NAIROBI
Gerda Rasmussen, P.O. Box 59034, NAIROBI
Mrs Celia W. Ricks, P.O. Box 30429, NAIROBI
Mrs Zipporha K. Rimbui, K.S.T.C., P.O. Box 30596, NAIROBI
Mr and Mrs R.R. Schippers, P.O. Box 1284, NAKURU, Kenya
Mrs Pratibha V. Shah, P.O. Box 46625, NAIROBI
Smita Shah, P.O. Box 42817, NAIROBI
Gilbert Van Der Stichelen, Belgian Embassy, P.O. Box 30461, NAIROBI
S. Wainwright, c/o Prof. of Orthopeadic Surgery, P.O. Box 30588, NAIROBI
Miss P. Watts-Russell, P.O. Box 40751, NAIROBI
John Frank Weller, The Ark, P.O. Box 101, MWEIGA, Kenya
Miss Tessa van der Willigen, P.O. Box 9534, DAR ES SALAAM, Tanzania
A.M. Wilson, c/o World Bank, P.O. Box 30577, NAIROBI
Patricia Ann Wootton, P.O. Box 46143, NAIROBI
Roger Charles Wootton, P.O. Box 46143, NAIROBI

Local Life Member

Mr and Mrs Scott Wallace, P.O. Box 30197, NAIROBI

Local Institutional Member

Kestrel Manor School, P.O. Box 14489, NAIROBI

Local Junior Members

Philip J.R. Goulder, Banda School, P.O. Box 24722, NAIROBI
Miss A. Kassam, c/o Kenya High School, P.O. Box 30035, NAIROBI
Betty Jean Linguist, Christian Student Leadership Centre, P.O. Box 48802, NAIROBI
Gitau J. Mbau, P.O. Box 30344, NAIROBI
Sally Moulton, P.O. Box 30197, NAIROBI
Ngigie S. Muiruri, P.O. Box 25, GITHUNWURI, Kiambu, Kenya
Meke Mukeshi, P.O. Box 30344, NAIROBI
Mutahi W.T., P.O. Box 11217, NAIROBI
Miss N. Muthiga, P.O. Box 14273, NAIROBI
Dorcas A. Nabwire, P.O. Box 54463, NAIROBI
Deborah Ann Perkins, P.O. Box 18118, NAIROBI
George M. Siboe, P.O. Box 30276, NAIROBI
Miss Dawn Vincent, P.O. Box 41746, NAIROBI

SOCIETY FUNCTIONS

Monday 12th March 1979 69th Annual General Meeting, National Museum Lecture Hall at 5.30 sharp. Meeting to be followed by a 30 minute film on the bird life of Lake Nakuru.

17th/18th March 1979 Due to adverse weather the Chyulu Hills excursion will be substituted for a week-end camp on Sancturay Farm, Lake Naivasha by kind invitation of the Manager, Mr John Kerr. Please bring full camping equipment, food and water. If you wish to take part, fill in the enclosed slip and return it to Mrs A.L. Campbell, P.O. Box 14469, NAIROBI as soon as possible. Information will them be sent; please enclose a stamped addressed envelope.

Monday 9th April 1979 at 5.30 p.m. in the Museum Hall. Dr Kenneth Bock will give an illustrated talk on 'A General Introduction to the Coral Reef - For Beginners'.

13th to 16th April 1979 Easter Week-end camping excursion to Ol Lolokwe near Isiolo, led by Mr and Mrs L.A.S. Grumbley, this is a repeat of last year's popular meeting. Plant study, birding and walking. Please bring full camping equipment, food and water. THERE IS NO PETROL BEYOND ISIOLO, AND NO WATER IN THE AREA. If you would like to take part in this excursion, please fill in the enclosed slip and return it to Mrs A.L. Campbell, P.O. Box 14469, NAIROBI before 1st April. Please enclose a stamped addressed envelope.

27th/28th/29th April 1979 Another special offer - Lake Baringo Lodge. Shs. 100/- full board per person per night for any or all these nights. If you wish to take advantage of this offer please fill in the enclosed slip and return it, with full payment to Mrs A.L. Campbell, P.O. Box 14469, NAIROBI as soon as possible. Please enclose a stamped addressed envelope.

Sunday 6th May 1979 Day excursion to Mr and Mrs Molloy's garden and surrounding forest near Banana Hill. By kind permission of Mr Gatu. Meet at the National Museum at 9.30 a.m. sharp and bring a picnic lunch if you wish to stay for the afternoon. It may be wet, so come prepared.

Monday 14th May 1979 We hope to arrange a lecture by Mr Heinz-Ulrich Reyer on 'Kingfishers of Lake Nakuru'.

June 1st/2nd/3rd and or adjoining nights SALT LICK LODGE. Shs. 160/- per person 1st night, Shs. 155/- per person 2nd night, Shs. 145/- per child over 8. This offer is for full board and taxes. If you wish to take advantage of this offer to visit a lovely area (about 25km from Voi and at the foot of the Taita Hills) please fill in the enclosed slip and return it with full payment to Mrs A.L. Campbell, P.O. Box 14469, NAIROBI as soon as possible. Please enclose a stamped addressed envelope.

NOTE Please enclose a seperate stamped addressed envelope for each of the above camps and lodge offers. Thank you.

THE EAST AFRICA NATURAL HISTORY SOCIETY

Chairman: J. S. Karmali
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Joint Library Sub-Committee (Society representatives) Dr J. Kokwaro, Mrs J. Hayes, M. P. Clifton.
Functions Sub-Committee Mrs A. L. Campbell, Mrs E. B. Angwin, M. Gilbert.

MEMBERSHIP

This offers you free entry to the National Museum, Nairobi; free lectures, films, slide shows or discussions every month in Nairobi; field trips and camps led by experienced guides; free use of the Joint Society-National Museum Library (postal borrowing is also possible); reciprocal arrangements with the Uganda Society's Library in the Uganda Museum, Kampala; family participation: wives and children of members may attend most Society functions; one copy of the *EANHS Bulletin* every two months; a copy of each *Journal* published during your period of membership; the Society controls the ringing of birds in East Africa and welcomes new ringers and runs an active Nest Record Scheme; activities such as plant mapping and game counting are undertaken on a group basis. Membership rates are given at the foot of this page.

JOURNAL

The Society publishes *The Journal of the East Africa Natural History Society and National Museum.* Each issue consists usually of one paper, however, sometimes two or more short papers may be combined to form one number. The aim of this method of presentation is to ensure prompt publication of scientific information; a title page is issued at the end of each year so that the year's papers may be bound together. Contributions, which should be typed in double spacing on one side of the paper, with wide margins, should be sent to the Secretary, Box 44486, Nairobi, Kenya. Authors receive twenty-five reprints of their article free, provided that these are ordered at the time the proofs are returned.

E.A.N.H.S. BULLETIN

This is a duplicated magazine issued six times a year, which exists for the rapid publication of short notes, articles, letters and reviews. Contributions, which may be written in clear handwriting or typed, should be sent to The Editor (*EANHS Bulletin*), Box 44486, Nairobi, Kenya. Line drawings will be considered if they add to the value of the article. Photographs cannot be published.

SCOPUS

The Ornithological Sub Committee publishes this quarterly bird magazine. Cost: EANHS members KShs. 50/- p.a., non-EANHS members KShs. 75/- p.a. All correspondence to D. A. Turner, Box 48019, Nairobi, Kenya.

MEMBERSHIP SUBSCRIPTION RATES

Life	One payment:	Kshs. 750/-
Institutional (schools, libraries) .	annual payment:	Kshs. 50/-
Full Local	annual payment:	Kshs. 50/-
Overseas	" "	Kshs. 70/-
Junior (full-time student, no *Journal* supplied) . . .	annual payment:	Kshs. 10/-

Subscriptions are due 1st January. From 1st July you may join for Kshs. 35/- and receive publications from that date. Application forms for membership are obtainable from the Secretary, Box 44486, Nairobi.

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EANHS

BULLETIN

70th ANNIVERSARY YEAR

A publication of the East Africa Natural History Society, Box 44486, Nairobi, Kenya. Price 4 shillings

CONTENTS

70 Years. A History 58
A Checklist of the Larger Mammals of Lake Nakuru National Park 64
Observations on Immature Fish Eagles 65
Verreaux's Eagle Owl Kill 66
Abdim's Stork Breeding in Kisii ? 66
Traditional Kenya African Dyes 68
Spinners, Weavers and Dyers of Kenya 70
A Plague of Moths 70
A New Mesembryanthemum ? 71
A Bird Distributional Mapping Scheme for East Africa . 71
Kindaruma Dam Camp 72
Wanted Known 73
For Sale and Wanted 73
Society Notes 73
Special Offer to Society Members 74
New Members 74
Society Functions 76

The Years of Challenge

The Society was faced with a great challenge in 1926, a challenge which brought to the fore the durability, resourcefulness and ability of the members of the committee. Many were the problems to be overcome in the years to follow, calling for deep thought, much discussion and sheer hard work. At a meeting in the Kirk Road Museum the Hon. Secretary told members of the committee that the government had plans for new offices and the realignment of a road which would mean the demolition of the museum. The committee decided that compensation of £4,500 be asked for and also that a site of equal value be given to the Society; the money to be used specifically on a building to house the collections and not to be merged with the Coryndon Memorial Fund. This fund had been started on the death of Sir Robert Coryndon and was originally intended to be used for a hall as an extention to the Kirk Road Museum and was to be named the Coryndon Memorial Hall.

During 1927 many meetings were held between government officials, the Coryndon Committee and the Society committee members. A proposal was made that the Society accept a plot previously occupied by the Lady Northey Home in exchange for the Kirk Road plot and the buildings for a museum in lieu of monetary compensation in compensation for compulsory acquisition, the ownership of the plot to be kept by government. This was not found to be acceptable. In February 1928 the committee again met to discuss sites. The Hon. Secretary of the Coryndon Memorial Committee outlined events and circumstances which led to the selection of a site at Ainsworth Hill, now Museum Hill, as one most suitable for a memorial and research institute. The question of agreement with the recommendation was put to the meeting and carried unanimously. The relationship of the Natural History Society to the Memorial in so far as transfer of collections was concerned and the consequent fate of the Kirk Road Museum was also discussed.

The Society committee recommended that the plot chosen by the Coryndon Memorial Committee be selected for the memorial institute and be vested in a Board of Trustees consisting of representatives of the government, the Coryndon Memorial Committee, the Natural History Society and the Nairobi Municipal Corporation. In view of the Natural History Society's willingness to transfer their collections and library to the proposed new museum and relinquish their Kirk Road building, government was asked to contribute a capital sum equal to the replacement value of the building, provided the money so obtained was used for additional buildings to the Coryndon Memorial Institute,

such as laboratories and study rooms, and these additions to become the property of the public as represented by the Board of Trustees. It was resolved that plans of the new building be submitted to the Society for approval before being finally adopted. The government agreed to pay £2,500 compensation to the Society for the loss of the Kirk Road Museum. £1,000 of this was at once voted to the Coryndon Fund. A further £1,000 was later donated to provide laboratories and study rooms, sketch plans of which had been submitted by Dr van Someren and these were included in the building. Mr Ernest Carr of the Carr Biscuit family and a member of the Society's executive committee also donated £1,000 and was voted an honorary life member. He was an extremely generous man and it is interesting to note that he built a road right up Mount Kenya from Chegoria to Hill Tarn, with a hut at the top of the forest and another at the foot of Lenana Peak.

The Society was given powers to utalise the Coryndon Memorial building for the purpose of a museum and to allow public access to it at reasonable times each day. The buildings and plot were to be surrendered in the event of it ceasing to engage in museum activities. The general structure of the Coryndon museum, now the National Museum, was completed in September 1929 and the Society's collections were transfered to the new building in November of the same year. Owing to the unsettled state of affairs no outstanding work had been undertaken during 1928. An important donation received in 1929 was a large collection of small mammals. This was made by Mr A.B. Percival, and was of special value as it had from time to time formed the basis of several scientific papers on the mammals of Kenya.

With the provision of better facilities a large amount of work was done on systematic collections and the exhibited material. New show cases were made in the museum workshop, many of which are still in use. The Ethnological section received valuable material collected by Sir Frederick Jackson and presented to the museum by Lady Jackson. Stone age culture was exhibited by material collected by Dr L.S.B. Leakey and deposited on loan by the Kenya Government. Journal no. 36 was published in late 1929 and contained some five plates of the new museum showing the entrance, the main hall and the staircase looking much as they do today, though many additions were made at later dates.

A special section was created to deal with the botany of the country. Mr Carr, who had felt for some time that the study of wild flowers and plants in Kenya had been neglected, offered to pay a salary of £300 a year for three years to a suitable botanist. This generous offer was accepted gratefully

and the services of Miss Napper were secured. Much work was done in this new section, 500 specimens being collected in a few hours at Mbagathi and the Nairobi area, this alone showed the vastness of the field to be dealt with. Kew Herbarium gave valuable help in identifying many specimens.

A room at the museum was furnished and set aside for the library, large and important additions were made and the Society was justly proud of the several thousand volumes housed there. A full time librarian was engaged to index and care for the books.

The official opening of the new museum was carried out on the 22nd September 1930 by His Excellency Sir Edward Grigg before a large gathering, and he paid special tribute to the memory of Sir Robert Coryndon, one of Kenya's great benefactors and a staunch supporter of the Society during his time as Governor. Well over 500 visitors made use of the museum during the first three months.

The Society published a special supplement to the Journal in 1930, the Jackson Memorial Issue. This contained a fine portrait of the late Sir Frederick loaned to the Society by the British Ornithological Union. He was the founder of the Society and, after his retirement as Governor of Kenya, had spent his declining years at Beaulieu-sur-Mer on the French Riviera. His dream had been to make available to ornithologists the observations of a lifetime. The manuscript of his work on the birds of Kenya Colony and Uganda Protectorate was well nigh completed at the time of his death. Lady Jackson had set her heart on the publication of this work and, with the help of Mr W.L. Sclater M.A., it was edited and completed in three volumes which were published in 1938. To commemorate in a useful manner the name of Sir Frederick, a fund was raised, its purpose being to purchase fittings for the new museum each bearing the inscription 'Jackson Memorial'. Another Journal of interest was No 37 which contained an article on Masai shields and spears by D. Storrs-Fox, the coloured illustrations were very interesting.

A section of the museum was provided for the display of insects which had an important effect on the economy of the country, such as locusts, mosquitos and insects destructive to timber. Outstanding phenomena such as polymorphism, mimicry and protective colouration were demonstrated. The gradual evolution of mimetic patterns from primative forms were also strikingly exhibited. Series of fish illustrating species of economic value from Lake Victoria were displayed while reptiles and amphibia were portrayed by coloured plaster casts, largely the work of Mr Alan Turner. The study collection of birds

representative of the avifauna of Kenya and Uganda was the finest of its kind in any museum. The Forest Department provided timber and botanical specimens and field notes from the coastal areas were supplied by Mr Graham of this department.

A large aviary was presented to the Society by Lady MacMillan in 1936 and was erected at the back of the Museum and stocked with 50 local birds. The aviary is now in the Snake Park and contains a variety of birds.

The popularity of the museum was indicated by the number of visitors recorded during 1931, over 1,700 adults and 300 school children, as well as parties of students from government departments, being admitted.

The botanical section was greatly honoured by the visit of Sir Arthur Hill, director of Kew, this did much to strengthen the cordial relationship between the Society and the Royal Botanical Gardens. The Herbarium was growing rapidly and carefully collected material and data was dispatched to Kew for identification. Many donations of specimens were made to the Society during 1931 and a donation of money was received from the Prince of Wales, later to become King Edward VIII, and on his abdication, the Duke of Windsor.

The double number of the Journal of July/October 1931 showed a wide variety of subjects covered by the Society. This included three articles on Lepidoptera by Dr van Someren and K St.A Rogers, T.H.E. Jackson and Major Moysey; notes on poisoning Fruit Bats by Dr Jex-Blake, Marriage Customs among the Masai by Dr Storrs-Fox, a nature doctor and his prescriptions, the age of the Rift Valley and notes of the Stone Age Cultures in Eastern Africa by Dr L.S.B. Leakey. Journal 44 of January 1932 was given completely to the notes of the Flora and Fauna of the Ruwenzori Mountains with reference to the Bujuku Valley by C.W.L. Fishlock and G.L.R. Hancock.

A note of interest to many members will be the fact that Miss Priscilla Allen was elected a member of the Society in 1932. She is still an active member and during her years with the Society has performed the duties of honorary librarian, honorary secretary and for many years as a member of the Executive Committee and has been a friend and adviser to many members. Miss Allen also formed the Uganda branch of the Society at a later date.

The financial report at the end of 1932 showed a sorry state of affairs, even after careful husbanding, the resources were insufficient to meet expenditure and this meant the curtailment of many normal activities. A reduction of grants

to less than half the original sum was severely crippling the Society. The task of running a public museum was no sinecure, the grant-in-aid from the government and municipality not being sufficient to maintain the museum. The Society therefore applied for assistance to the Carnegie Corporation. As a result a grant of £1,000 was made and used for permanent exhibition cases and storage cabinets, these being installed finally in 1935. A number of geological cases were also installed, these being purchased from a donation received from Mr de Ganahi, who was elected an Hon. Life Member.

Mr M.E.W. North was elected to the Society in 1934, he became known world wide for his knowledge of birds and his recordings of bird songs. Several scientific expeditions visited Kenya during 1934 and laboratory accommodation was extended to members of the Cambridge Lake Rudolf Expedition, the British Museum Expedition, the California University group and to Mr A. Loveridge, a former curator who was working at Harvard University in America.

Two thousand visitors were admitted to the museum during 1934. Work in the library was brought to a standstill due to the resignation of the librarian, and funds would not allow for a new appointment to be made.

At the begining of 1935 the Society sustained a sad loss by the death of Mr R.F. Mayers, director of the East African Standard and for several years an active member of the committee and a Coryndon trustee. A letter of condolence was sent to his widow.

It seemed impossible for the Society to run the museum or make any progress on the funds available and the 25th Annual Report of 1935 showed very telling figures. The Society had been obliged to surrender its Kirk Road plot and building and sink the compensation money in a building which it would not own, controlled by a board of trustees on which it was not represented. Representation was made to government for safeguards and also for adequate funds for the conduct of a public museum. The Society was assured of just treatment and support. The cash value of contributions which government had made towards establishing the museum were :

Grant towards cost of erecting the building	£ 3,000
Value of land assigned to the trustees	£ 4,500
Capital grant for initial furnishings	£ 1,000
Compensation money	£ 2,500
	£11,000
Add subscriptions from the public	£ 6,000
	£17,000

The funds available annually for the museum's upkeep and development were totally inadequate and out of proportion to the capital invested. Between 1924 and 1929 the annual government grant to the old Kirk Road museum was £300 and no salaried staff were employed. The following table indicates to what extent support was given and maintained from 1930 onwards:

	1930	1931	1932	1933	1934	1935	1936
Government Grant £	700	700	700	600	600	300	300
Capital Grant £	1,000	Nil	Nil	Nil	Nil	Nil	Nil
Municipal Grant £	500	400	200	400	400	300	300
Mr E. Carr's Grant £	100	100	the continuance of this grant was contingent on maintainance of government and municipal grants at the level of £700 and £500 annually				

The Society was trying to run a museum on behalf of the trustees but was severely handicapped by lack of understanding and the absence of strong backing. Of necessity the taking over of the Coryndon Museum had meant the employment of a salaried staff and to this end estimates of expenditure were submitted to government resulting in the grant of £700. The government was advised that the cost of the botanical section would be made by Mr Carr for a period of three years only. A special sub-committee of the executive committee was appointed to scrutinise the Society's budget. It reported that expenditure was reasonable and recommended a grant-in-aid for 1931 noting that the withdrawal of this would have a very serious effect on the activities of the Society. The estimates for 1931 showing expenditure of staff amounting to £800 over and above Mr Carr's grant was considered reasonable. The sub-committee reported that the value and importance of the work undertaken by the Society was in no doubt.

In 1930 the following staff were employed : curator and two personal assistants paid for by the curator, a botanist and a librarian. 1931: a curator, one personal assistant paid for by the curator, a botanist and a librarian. 1933/34 a curator, botanist and librarian - all at 33% reduction in salary. 1935: a curator, a part-time librarian and a botanist for three months only; all at reduced salaries. 1936: a curator, a part-time librarian, both at reduced salaries.

Needless to say, the existing staff was totally inadequate and it could not be maintained unless there was some security of tenure of employment and monies would not be forthcoming from the Carnegie Foundation, these grants were conditional that subscribing authorities would not reduce their annual support as a result of these special grants.

A CHECKLIST OF THE LARGER MAMMALS OF LAKE NAKURU NATIONAL PARK

It is now over 12 years since Williams gave a checklist of the mammals of Lake Nakuru National Park in his 'Field Guide to the National Parks of East Africa'. In the meantime the Park area has been increased from 64 to 201 km^2. What is the current state of affairs ? Are all the species recorded earlier still there or do we perhaps have even more species now ?

The following table gives a list of larger mammals recorded inside the Park during the last two years. Their abundance is indicated by the lettering c (common), o (occasional) and r (rare). For an estimate of the actual number of the common diurnal species the reader is referred to a report on the game counts in Lake Nakuru National Park (Bulletin 1978: 108-109. Shrews, bats and rats are not included in the list.

Three additional species may be in the Park, but their identification at present remains doubtful : Small-spotted Genet Genetta genetta, Common Otter Lutra lutra and Blue Duiker, Cephalophus monticola.

Listed by Williams, but no longer in the Park are Cheetah, Serval, Lion and Masai Giraffe. Most likely also no longer in the Park are Bushbaby, Sykes Monkey, Lesser Ground Pangolin, Dwarf Mongoose, Tree Hyrax and Aardwolf.

The following species not listed by Williams are in the Park now : Warthog (certainly in the Park for a long time already), Bushpig (at least 10, and they are reproducing), Striped Hyaena (probably only one), Black-fronted Duiker (not uncommon), Golden Cat (only two sightings reported in the last two years), Egyptian Mongoose (maybe confused with the Slender Mongoose in the past) and Rothschild Giraffe (introduced from the Soy area in 1977).

1	Bushpig Potamochoerus porcus	r
2	Warthog Phacochoerus aethiopicus	c
3	Hippo Hippopotamus amphibius	o
4	Rothschild Giraffe Giraffa camelopardalis rothschildi	o
5	Black-fronted Duiker Cephalophus nigrifrons	o
6	Bush Duiker Cephalophus grimmia	r
7	Kirk's Dik-Dik Madoqua kirki	c
8	Steenbok Raphicerus campestris	o
9	Klipspringer Oreotragus oreotragus	r
10	Bushbuck Tragelaphus scriptus	c
11	Eland Tragelaphus oryx	r

12 Defassa Waterbuck Kobus ellipsiprymnus defassa c
13 Mountain Reedbuck Redunca fulvorufula o
14 Bohor Reedbuck Redunca redunca c
15 Impala Aepyceros melampus c
16 Grant's Gazelle Gazella granti r
17 Thomson's Gazelle Gazella thomsoni c
18 African Buffalo Syncerus caffer c
19 Burchell's Zebra Hippotigris quagga o
20 Black Rhinoceros Diceros bicornis r
21 Rock Hyrax Procavia capensis c
22 Aardvark Orycteropus afer c
23 Bush Squirrel Paracerus spp r
24 Porcupine Hystrix spp r
25 Spring Hare Pedetes capensis c
26 Cape Hare Lepus capensis c
27 Side-striped Jackal Canis adustus r
28 Black-backed Jackal Canis mesomelas c
29 Hunting Dog Lycaon pictus r
30 Bat-eared Fox Otocyon megalotis r
31 Zorilla Ictonyx striata r
32 Ratel Mellivora capensis r
33 Large-spotted Genet Genetta tigrina o
34 African Civet Viverra civetta r
35 Egyptian Mongoose Herpestes ichneumon c
36 Slender Mongoose Herpestes sanguineus o
37 Marsh Mongoose Herpestes paludinosus c
38 White-tailed Mongoose Ichneumia albicauda o
39 Striped Hyaena Hyaena hyaena r
40 Spotted Hyaena Crocuta crocuta r
41 Leopard Panthera pardus o
42 African Wild Cat Felis silvestris r
43 Golden Cat Profelis aurata r
44 Olive Baboon Papio cynocephalus c
45 Vervet Monkey Ceropithecus aethiops c
46 Black-and-White Colobus Colobus polycomos o

Dr Peter Wirtz, P.O. Box 33, NAKURU, Kenya

OBSERVATIONS ON IMMATURE FISH EAGLES

During the last three weeks along a particular stretch of the North Lake Road, Naivasha, Kenya, large numbers of immature Fish Eagles, Haliaeetus vocifer, have been observed roosting. They arrive between 5.30 and 7 p.m. and roost in fig and yellow-barked acacia trees. By 8 a.m. they have usually dispersed. Numbers seem fluctuate between 18 and 33 and most appear to be in their first year plumage. The favoured strip of trees is only 400 metres long.

This behaviour seems unusual to a layman remembering that the usual population density for Fish Eagles around Lake Naivasha is roughly one pair per .75 km of shore line. As only one chick seems to be reared, in near isolation, the observed social roosting of immature birds without any friction, interaction or display would appear to be odd. One or two locally resident adult birds are usually amongst this group.

Any comment from our bird boffins ?

R.D. Morgan, P.O. Box 47, GILGIL, Kenya

VERREAUX'S EAGLE OWL KILL

On 25th January 1979 in Amboseli National Park, Kenya I witnessed a Verreaux's Eagle Owl, Bubo lacteus, catch and kill a half grown Vervet Monkey, Cercopithecus aethiops.

It carried it quite some distance and fed it to its own young. Another interesting factor is that the kill took place at 15.00 hrs in bright sunlight.

Karl H. Poolman, P.O. Box 44239, NAIROBI

ABDIM'S STORK BREEDING IN KISII ?

Two boys came to bring a bird on the morning of 5th April 1979 at about 9 a.m. They claimed that they had just found it in the maize field of their school (St. Mary's Primary Boarding School, Mosocho) while they were weeding. The bird was unable to fly. It appeared to be a young Abdim's or White-bellied Stork, Ciconia abdimii. The local name in Kisii (Ekegusi) is 'Riagongo' and the birds are seen on the fields when people are digging.

The bird was placed in an enclosure and was seen the same afternoon eating small scraps of soft meat. The following morning it was very weak and died a few hours later.

As the bird is not in 'A Checklist of Birds Seen at Mosocho' by C.T. Eddy, 1978 (a copy of this was deposited by the author in the Bird Room, National Museum), and Mackworth-Praed and Grant 'Birds of Eastern and North Eastern Africa' does not give any breeding record for Kenya, the following details may be of interest.

Attempts to find a nest by observation in the vicinity of the school and by enquiring from the local people were

negative. Yet it is thought to be a very young bird. When it was in the enclosure the bird was seen trying to find an opening in the fence but at no time was it seen trying to escape by flying.

The upper half of the neck was covered by grey down feathers on a red skin. The whole cover of feathers was thin and on the inside of the wings the upper parts were still quite bare especially in the regions of the wrist and elbow joints. Also the skin of the breast bone was visible between the feathers in the dead bird. Apart from the bright red colour of the toes and the ankle joint, the feet and legs were brownish red. The bill had about the same colour except the tip and the lower border of the nostrils which were orange. The upper mandible had grey streaks on its upper surface and above the nostrils. The lower mandible was not horny below but for two thirds along its length it had soft red skin.

As compared with the coloured drawing in Williams, 'A Field Guide to the Birds of East and Central Africa', plate 3.3, opposite page 48, the bird was considerably darker with black wings and crown; the lower half of the neck and breast were grey-brown with only a faint green and violet gloss, only seen on close inspection of the dead bird. The lower wing coverts on the inside of the wings were of the same shade gradually darkening towards the primary and secondary flight feathers. On the outside of the wings the lesser coverts were somewhat darker merging via the other coverts to the black primaries and secondaries.

The blue patch of bare skin below the eye continued backwards as far back as the ear hole and the latter was surrounded by grey skin which continued forward below the blue and covering the hind part of the lower mandible for 4 cm. The blue patch had faded considerably already when the bird was examined about an hour after death.

The following measurements were taken of the dead bird :

Length (from the tip of bill to tip of tail)	72.5	cm
Wing (pressed down)	44	cm
Wing span (extended fully, from tip to tip)	166	cm
Tail (from insertion to tail feathers to tip)	18.5	cm
Bill (lower mandible, from the side)	14	cm
Red Skin (on lower mandible below, continuous from neck)	10	cm
Grey Skin (covering lower mandible from side)	4	cm

Bro. M. Maas, Cardinal Otunga High School, Mosocho,
P.O. Box 520, KISII, Kenya

TRADITIONAL KENYA AFRICAN DYES

Two years ago I came across a pamphlet in one of my many bookcases, published during the Second World War for the East African Spinning and Weaving Committee, a branch of the East African Research and Development Board, containing some very interesting information on spinning, weaving and dyeing of wool. There was a short article on local plants that produce dyes that are traditional to the African, by Daphne Wingfield, now Daphne Curtis. This find was a big step forward for me as I had only recently taught myself to spin wool from a book, and I was eager to colour my produce for weaving and was most reluctant to use synthetic colours.

In this article Daphne had mentioned the root of Rubia cordifolia and gave the Kikuyu name 'Gakaraku'. I went to my headman, a Kikuyu, on the farm and asked him if he knew of 'Gakaraku'. It appeared that not only he knew, but all my older workers did as well, and they were very willing to take me into the forest and show me where it grew. My farm, at Njoro is right next to the forest, so this was not a major expedition. A Plant Pathologist, Dr Guthrie, was staying, plus, as usual, a fair number of children, so we all, grown-ups, children, dogs and several members of my African staff, walked to the forest to hunt for roots. It was a most rewarding morning as my staff not only knew 'Gakaraku' but found me several other roots and leaves that their grandparents used for dyeing their clothes and string for their baskets. Amongst my staff was a member of the Kipsigis tribe who told me that they used 'Gakaraku' too, but they called it 'Chesalet'. During our morning we were able to collect three different roots and leaves from a tree :

Rubia cordifolia	Root	Gakaraku (Kik)	Chesalet (Kip)
Rumex abyssinicus	Root	Mugugatio (Kik)	Minduwet (Kip)
Euclea divinorum	Root	Mukinyei (Kik)	Uswet (Kip)
Erithrina abyssinica	Leaves	Mahuti (Kik)	? (Kip)

John Guthrie, when he left, took samples of our finds and had them identified for me and I was faced with the dyeing. Never having done any dyeing before it was back to the book again. They gave you a long list of equipment that is needed, quite a bit of it is unobtainable in Kenya, but Africans must have dyed with the minimum, but no one seemed to know what they did use.

I started off by dyeing in a karai, a large iron pot the Africans use for household work. The book on dyeing explains about mordanting wool before dyeing, using potassium aluminium sulphate (Alum), or potassium di-chromate (Chrome), ferrous sulphate (Iron) or stannous chloride (Tin). These are the

main chemicals used. There are many others but I felt for a beginning four were sufficient. With each dyeing, I always did one lot without a mordant. Africans would not have used these chemicals in the past. Sometimes the colour was better without which shows how necessary it was to do this. I was disappointed with the first colours achieved as they were not as bright as perhaps they should be but the excitement of getting any colour at all was tremendous. It came to me that perhaps the karai, because it was iron, was having a dulling effect on the colour and perhaps a soufferia, an aluminium pot the Africans use for cooking, might not be a better utensil to dye in. I was delighted to find the colours much brighter, but I was certain that in the days that Africans used natural dyes there was no such thing as a soufferia but they would have clay pots. These pots are made even today from a fire-proof clay by Africans living on the Lake shore near Kisumu and they export them all over Kenya. A clay pot was easily obtained from our local market and the resulting colours proved that I was right. They were delightful and we use a clay pot for nearly all dyeing except for a few flowers and also leaves from which I obtained blue, but that is another story.

The colours I get from the above traditional plants are as follows :

Rubia cordifolia	Alum	Pink
	Chrome	Red/Brown
	No Mordant	Pink
Rumex abyssinicus	Alum	Yellow
	Chrome	Brown
	No Mordant	Orange Yellow
Euclea divinorum	Alum	Light Brown
	Chrome	Dark Brown
	No Mordant	Light Brown
Erythrina abyssinica	Alum	Clear Pale Yellow
	Chrome	Dull Pale Yellow
	No Mordant	Maize Yellow

These are the first four traditional plants used. Since then many more have come to light, also beautiful colours from plants that are not traditional but easy to obtain from the forest and garden, and these are all used in my weaving. Reds, yellows and browns are the traditional colours of the African in East Africa; blues and greens they did not use although the West African used blue extensively and the Pokot tribe used a blue of sorts made from a thorn tree burnt to a charcoal and then mixed with a white clay. These days they use Recketts Blue!

Lorna Hindmarsh, P.O. Box 81, NJORO, Kenya

SPINNERS, WEAVERS AND DYERS OF KENYA

An association of Spinners, Weavers and Dyers of Kenya has been formed, to put those interested in these crafts in touch with each other through a quarterly newsletter, meetings and field trips; so that methods, ideas and advise can be exchanged.

Mrs Hindmarsh's article on Traditional Kenya African Dyes first appeared in the second issue of the Association's newsletter. For further information please contact Ray and Doreen Meynink at P.O. Box 24845, Nairobi, or phone Karen 2589.

A PLAGUE OF MOTHS

This year we have noticed on some self-sown castor oil trees, Ricinus communis, in our garden what amounts to a plague of moth caterpillars.

Eggs are laid in small masses, covered with fawn coloured hairs, on the undersides of the leaves. Each egg is a yellowish-brown plattened globe with a central dent. The caterpillars are hairy, with light orange and black markings. They feed voraciously and are mature when about 2 cm long.

The brown pupa is covered with a greyish-brown cocoon again with hairs stuck on. Here they pupate attached to the house wall, especially in crevices.

The moth is beautiful. It had pure white 'feathery' fringed wings which are folded into a tent-shape at rest and measure about 4 cm across when expanded. The legs and abdomen are also covered with white hairs but two shining red patches are visible on the thorax and the abdomen had reddish rings at the segment joints. When the moth is disturbed, it cocks up its tail which has an orange and brown tuft at the end, and exudes a drop of orange liquid.

It would be interesting to know its name.

Rachel A. Nicholson, P.O. Box 259, MBEYA, Tanzania

(From the description, this moth is in the family Lymantriidae, the tussock moths, which does not seem to be in the Museum collection. It would be very interesting to see a specimen. I know of no species of insect which feeds on castor oil, but something must as the leaves are often full of holes. Ed.)

A NEW MESEMBRYANTHEMUM ?

A Mesembryanthemum with magenta flowers which is certainly not the widespread Delosperma nakurense (which has white or pale pink flowers) has been photographed but not collected in Narok District on a quartzitic ridge at c. 1°14'S, 35°44'E on the left side of road C 340 south east of Ewaso Ngiro. This may be Delosperma abyssinica not previously recorded south of Mt Kulal, or D. oehleri which has only been found once (in N. Tanzania in 1907), or a new species.

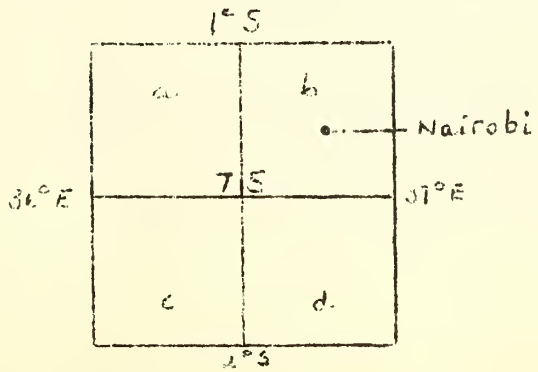
Anyone visiting this area should search for this very interesting plant and if possible obtain herbarium material.

J.B. Gillett, Herbarium

A BIRD DISTRIBUTIONAL MAPPING SCHEME FOR EAST AFRICA

Zambia, Ethiopia and Somalia have embarked in recent years on bird distributional recording schemes based on the use of $\frac{1}{2}^{\circ} \times \frac{1}{2}^{\circ}$ mapping squares, using latitude and longitude lines. The Ornithological Sub-Committee of the Society has decided to organise a similar exercise for East Africa. We hope that this will be an activity which many members will be able to participate in and enjoy. The primary object is to record all species which have occurred within a given square. Where known, it is also intended to keep a record of the months involved. It is envisaged that with this type of information it will be possible within a few years to produce an Atlas of distribution of species within Kenya, and later perhaps within East Africa as a whole.

Each half degree square occupies an area about 50 km x 50 km, and there are of course four such squares within each square bounded by 1° latitude and longitude lines. There are 115 of these larger (1°) squares involved in East Africa, and these are numbered from northwest to southeast. The four mapping squares within each are designated a,b,c,d. Thus, the $\frac{1}{2}^{\circ}$ square including Nairobi is 75b, the northeastern quarter of the 1° square (75) bounded on the north by latitude 1°S and on the west by longitude 36°E.



For Kenya, the limits of the 1^{o} squares are shown on Survey of Kenya Route Map SK81, and using this map the boundaries between the smaller $\frac{1}{2}^{o}$ squares can be easily determined.

Don Turner will organise the central collection of data in Nairobi and keep master lists for each square. We envisage that people living or working further afield might care to take some responsibility for recording or encouraging others to record in groups for squares in their area. Anyone interested in taking part in the enquiry should make contact with D.A. Turner, P.O. Box 48019, Nairobi. Obviously, lists made during a stay in a square, or even notes made whilst travelling through a more remote area are likely to be useful, particularly if accompanied by a note of the month involved. Tick-off lists, when they become available from the Museum, will considerably ease the mechanics of recording. It is planned to incorporate as much already existing information as possible, so if anyone has local lists for sites which can be localised within a $\frac{1}{2}^{o}$ square, we would be grateful for such data.

D.J. Pearson, Chairman OS-C

KINDARUMA DAM CAMP

Although over 20 people signed on for this trip on 10th - 11th February 1979, only 11 attended. Presumably because of the very heavy storm experienced in Nairobi on the night of the 9th.

There had been very little rain in this area for some time so conditions were comfortable. In fact, it was very hot, especially on the Sunday. The bird list which we compiled amounts to over 150 species. This is good considering the small number of observers. We had some very good views of Hippo and Crocodile in the river by the side of our camp site.

There was also an abundance of small game around. In a nearby unused quarry were several families of Rock Hyrax which we watched. On the Sunday morning we had an organised walk through the bush to the rapids which we could see from the camp and which lulled us to sleep on the Saturday night. I think every one through that the hot, tiring walk was worthwhile on arrival. The surrounding plant life was very lush, but unfortunately we had no expert with us.

Elizabeth and Robin Myall

WANTED KNOWN

The Director of the National Parks of Senegal, P.O. Box 5135, Dakar, Senegal wishes to announce that 23 subadult pink flamingoes were ringed in the Parc National du Delta du Saloum on 28th February 1979. Rings are as follows :

Orange aluminium Nos 281 - 290
371 - 380
Yellow Plastic Nos CL, DP & AP.

Could all birdwatchers and ornithologists keep an eye out for these birds and report to the above address any sightings.

FOR SALE AND WANTED

FOR SALE: Tent, 8' x 9', 8'high in middle, 5' along sides, sewn in groundsheet, 8 screened windows, flysheet. Shs. 900.00

WANTED: stopwatch and magnifying glass and metal jerry can.

Please contact J. Rudnai, P.O. Box 56519, NAIROBI

SOCIETY NOTES

Copy Wanted for Bulletin Articles for the next Bulletin are needed, please help by sending in your notes and observations. Address : Mike Clifton, Editor, EANHS Bulletin, P.O. Box 44486, Nairobi. Thank you.

Aloes of Tropical Africa and Madagascar Shs. 190/- to members. We have already sold out of the first lot of these books, but more are on order, so please place your orders with the Secretary in the office at the Museum.

Birds of the African Rain Forest. These two records are on sale to members at Shs. 90/- for the two records. Available at some lectures and in the office. Beautifully recorded and well worth the money.

A Guide to Common Reef Fishes of the Western Indian Ocean by our fellow member Ken Bock are still on sale. Price Shs 32/- each. An excellent book, and recommended for any visitor to the coast.

Bird Lists still needed for members visiting a new area. The Secretary would be happy to receive any locality lists from members.

SPECIAL OFFER TO SOCIETY MEMBERS

Serena Lodges and Hotels are offering special rates for a limited period to Society members :

'From 16th April we have off-season rates for Kenya residents at the Serena Beach Hotel, the Amboseli and Mara Serena Lodges.

The daily rate at the Serena Beach Hotel is Shs. 170/- per person full board, children under 2 years free and children 2 to 12 Shs 85/- a child. Low season rates apply until 16th July 1979.

At the Amboseli and Mara Serena Lodges the daily rate is Shs 200/- a person full board, children under 12 pay Shs 100/- full board and there is no charge for children under 2 years. These rates apply until 30th June 1979.

We also have a complete package including return transport Nairobi to the lodges, full board and overnight accommodation, picnic lunch on return, game park entrance fees and game runs in the park. This costs Shs 700/- per person, less 50% for children under 12 with those under 2 years free.

We have decided to offer an additional 10% rebate to club members who in groups of five persons and above decide to make block bookings.

Here is something special and we hope members will take advantage of this offer. Members should contact Mr A.X. Miranda, Sales and Reservations Manager at the Central Reservations Office located at the Nairobi Serena Hotel (Phone 338656 and 338654). Current membership cards will have to be shown '.

NEW MEMBERS

The following new members have been elected to the Society:

Local Full Members

Miss Yvonne Ackerman, Canadian High Commission, P.O. Box 30481, NAIROBI
Anthony Clifford Allison, ILRAD, P.O. Box 30709, NAIROBI
Mr R. Briggs, P.O. Box 30766, NAIROBI
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Dr E. Beck, University of Bayreuth, Botanical Institute, D8580
Douglas T. Cheesman Jr, De Anza College, Cuprtino, California 95014, U.S.A.

SOCIETY FUNCTIONS

Sunday, 6th May 1979 Day excursion to Mr and Mrs Molloy's garden and surrounding forest near Banana Hill. By kind permission of Mr Gatu. Please meet at the National Museum at 9.30 sharp and bring a picnic lunch if you wish to stay for the afternoon. It may be wet, so come prepared.

Monday, 14th May 1979 5.30 p.m. in the Museum Hall, Nairobi. Lecture by Dr Heinz-Ulrich Reyer on 'Kingfishers of Lake Nakuru'.

26th/27th May 1979 Week-end excursion to the plant sanctuary at Mutomo about 70 km North of Kibwezi. Leader: Mr Mike Gilbert. Members wishing to take part in this excursion should be prepared to camp bringing all equipment and water and fill in the enclosed slip, which should be returned to Mrs A.L. Campbell, P.O. Box 14469, Nairobi immediately. Please enclose a stamped addressed envelope.

June 1st (and/or 2nd and 3rd) 1979 Salt Lick Lodge. The charges for this week-end have been further reduced to Shs. 150/- per night per adult all inclusive for the first night; Shs 125/- second night. Children under 12, Shs. 72/50 per night. Anyone who had already sent cheques for the previous advertised rate will receive a refund at the Lodge. If you wish to take advantage of this offer to visit a lovely area (about 25 km from Voi and at the foot of the Teita Hills) please fill in the slip and return it with payment in full in a crossed cheque made out to Hilton Lodges. Send this to Mrs A.L. Campbell, P.O. Box 14469, Nairobi immediately. Please enclose a stamped addressed envelope.

Monday, 11th June 1979 5.30 p.m. at the Museum Hall, Nairobi. Mr John Reynolds will give an illustrated lecture on 'Highlights of 20 years birding in East Africa'.

Monday 9th July 1979 5.30 p.m. at the Museum Hall, Nairobi. Mr S. Stephenson will give an illustrated lecture on 'The Wild Life of Ethiopia'.

Sunday, 15th July 1979 Day excursion to the Kikuyu Escarpment Forest. Leaders Mike Clifton and Mike Gilbert. Botany and insects will be studied as well as the high-level bird life. Full details in the next Bulletin.

Monday 13th August 1979 5.30 p.m. in the Museum Hall, Nairobi. Mr Jens Høgel, Chief of U.N.E.P. Desertification Unit will give an illustrated lecture 'What does U.N.E.P. do about Desertification'.

September 8th/9th 1979 Week-end excursion to Njoro. Details in the next Bulletin.

THE EAST AFRICA NATURAL HISTORY SOCIETY

Chairman: J. S. Karmali
Vice-Chairman: Dr. J. O. Kokwaro
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Joint Library Sub—Committee (Society representatives) Dr J. O. Kokwaro, M.P. Clifton.
Functions Sub-Committee Mrs A. L. Campbell, Mrs E. B. Angwin, M. Gilbert.

MEMBERSHIP

This offers you free entry to the National Museum, Nairobi; free lectures, films, slide shows or discussions every month in Nairobi; field trips and camps led by experienced guides; free use of the Joint Society-National Museum Library (postal borrowing is also possible); reciprocal arrangements with the Uganda Society's Library in the Uganda Museum, Kampala; family participation: wives and children of members may attend most Society functions; one copy of the *EANHS Bulletin* every two months; a copy of each *Journal* published during your period of membership; the Society controls the ringing of birds in East Africa and welcomes new ringers and runs an active Nest Record Scheme; activities such as plant mapping and game counting are undertaken on a group basis. Membership rates are given at the foot of this page.

JOURNAL

The Society publishes *The Journal of the East Africa Natural History Society and National Museum.* Each issue consists usually of one paper, however, sometimes two or more short papers may be combined to form one number. The aim of this method of presentation is to ensure prompt publication of scientific information; a title page is issued at the end of each year so that the year's papers may be bound together. Contributions, which should be typed in double spacing on one side of the paper, with wide margins, should be sent to the Secretary, Box 44486, Nairobi, Kenya. Authors receive twenty-five reprints of their article free, provided that these are ordered at the time the proofs are returned.

E.A.N.H.S. BULLETIN

This is a duplicated magazine issued six times a year, which exists for the rapid publication of short notes, articles, letters and reviews. Contributions, which may be written in clear handwriting or typed, should be sent to The Editor (*EANHS Bulletin*), Box 44486, Nairobi, Kenya. Line drawings will be considered if they add to the value of the article. Photographs cannot be published.

SCOPUS

The Ornithological Sub Committee publishes this quarterly bird magazine. Cost: EANHS members KShs. 50/- p.a., non-EANHS members KShs. 75/- p.a. All correspondence to D. A. Turner, Box 48019, Nairobi, Kenya.

MEMBERSHIP SUBSCRIPTION RATES

Life	One payment: Kshs. 750/-
Institutional (schools, libraries) .	annual payment: Kshs. 50/-
Full Local	annual payment: Kshs. 50/-
Overseas	" " Kshs. 70/-
Junior (full-time student, no *Journal* supplied) . . .	annual payment: Kshs. 10/-

Subscriptions are due 1st January. From 1st July you may join for Kshs. 35/- and receive publications from that date. Application forms for membership are obtainable from the Secretary, Box 44486, Nairobi.

NOTES FOR CONTRIBUTORS

Members of the Society (and non-members) are asked to follow these simple instructions when writing articles or letters for submission to the *Bulletin*. The *Bulletin* is presented six times a year in a duplicated format: the paper size is 20.5×23 cm (10×8 inches), line drawings can be reproduced but the area should not be more than 17.5×23 cm. Lettering on figures should preferably be in 'Letraset', neatly done in Indian ink or left blank: if the last method is followed, the lettering should be indicated on an overlaying sheet and should *not* be done on the figure. Figures should be prepared on good quality white writing paper and not on Bristol Board or other thick material. Whenever plants or animals are mentioned the scientific name should also be given but not in parenthesis. Trinomials should not be used unless there is good reason to do so. Author's names of species are not required.

Contributions may be typed (preferably) or written clearly and should be sent to: M. P. Clifton, Box 44486, Nairobi, Kenya. Receipt of contributions will be acknowledged.

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BULLETIN

70th ANNIVERSARY YEAR

A publication of the East Africa Natural History Society, Box 44486, Nairobi, Kenya. Price 4 shillings

CONTENTS

70 Years. A History 78
Congratulatory Letters to the Society 84
The Tale of Two Swifts 88
A Trip to Lake Bogoria 91
Possible Interaction of Lions, Cheetahs, Vultures
and Tourist Vehicles in Amboseli 92
Unusual Feeding Habits of Hammerkop, Scopus umbretta . . .93
Weekend Excursion to Salt Lick Lodge. 93
Contents of Scopus. 95
For Sale. 96
Society Notes 96
New Members 97
Society Functions 98

The Decisive Years

The Society had agreed to assume the responsibility of organising and running a museum in the Coryndon building. It was felt that such an institution should form an integral and important part of the life of every community so that irreplaceable data should not be lost for future generations.

Increasing difficulties, financial and otherwise, faced the Society during 1936. Expenditure was reduced to the minimum consistant with efficiency. Only by devotion to their work and the Society did the staff carry on. A statement had been published by government to the effect that in the opinion of the financial committee, the Society was not conducting the affairs of the museum in the most economical manner. They were therefore not willing to increase their grant. The Society could not accept this public criticism and the executive committee was of the opinion that this was a most unfair statement.

A meeting was requested with the Colonial Secretary in order to obtain an explanation and to request the setting up of a public committee of enquiry into the management of the museum as the Society would welcome a full investigation. Government had, amongst other things, criticised the curator's salary. The Society's committee was unanimous in its opinion that this was not excessive for the services rendered. The number of staff had also been criticised. The actual duties which a curator was required to be competent in were not only those connected with systematic collection in the field, but also research in entomology, ornithology, mammalogy, botany, herpetology and anthropology. He was also expected to possess a working knowledge of general museum organisation and be conversant with ordinary laboratory methods, general administration, organisation and control of the library. Also the secretarial work of the museum and the Natural History Society and to be able to make the innumerable decisions necessary each and every day. The Society alone could not meet the salary of such a person and the basic menial staff required.

Finance was the keystone of the activities of the Society and the running of the Coryndon museum; continued assistance from government was essential. Much of the material displayed in the large building which the Society had taken over was on loan. In order to replace this material funds were needed to employ collectors, meet travelling expenses and the cost of preparing the material. With each and every year allowed to elapse, the cost of replacements increased.

The Society was in a very strong position as far as assets were concerned and accessions to study material were

maintained throughout 1936. Of particular note and value was a collection of Diptera, mainly the result of continued research on Trypetidae,which contained many new species and new records for Kenya. The laborious work of identification and description was carried out entirely by Mr H.K. Munro of the Department of Agriculture in Pretoria. This work was written up and published in Journal No. 61 of June 1938.

The British Museum (Natural History) continued to give help by determining many thousands of insects; the assistance given being much appreciated in view of the fact that the Society's collections were not part of a state organisation. This privilege was taken as an indication of the value of the material to entomological science.

The bird collection was considerably augmented by material donated by Mr Gilbert H.E. Hopkins, formally an active member of the executive committee of the Society, who had been transferred to the Agricultural Department in Uganda.

A magnificant pair of elephant tusks, secured for the museum as the result of His Excellency the Governor's personal interest in the Society, were deposited on permenent loan. These tusks, weighing 170 and 172 lbs respectively remained government property and are still on view to the public near the main entrance to the museum.

On the preservation of the fauna of Kenya the Society held very definate views, one of the most important being the proposal to set aside certain areas as game sanctuaries. One particular proposal which received the approval in principle, both of the Colonial Office and local government, related to an area south of Nairobi, known as 'Lone Tree', now part of the Nairobi National Park. There was reason to believe that this unique natural "zoo" would be set aside and vested in a board of trustees, to be developed and maintained in perpetuity for the peoples of Kenya and visitors from overseas.

From its inception the Society has been multi-racial. The number of visitors is always an index of the interest taken in a museum and during the year 1936 a total of 5,099 visitors was recorded; a noteworthy feature being that a considerable proportion of these visitors were of Indian and African origin. An increase in the number of pupils of all races from schools was also recorded.

In 1937 His Excellency Sir Robert Brooke-Popham was elected a patron of the Society and took a very keen interest in its progress.

The Society was very pleased to record an increased grant from both the government and the municipal council in

1937, each of £100. Two further donations were made. Rear Admiral Lynes C.B. subscribed £100, which was expended in constructing further habitat groups on display, while a sum of £500 was received from Mr W.H. Campbell of New York, who was an Honorary Life Member of the Society. This gift was for future botanical work and was important as so much significant work was derived from its use.

Curtailment in the number of Journals issued during the year was due to the calls on the time of the Honorary Secretary, who was preparing evidence for the committee of enquiry which had not yet taken place. Future numbers of the Journal compensated for this.

One public lecture was given during the year by A.M. Champion Esq., C.M.G. on his trip across Africa from Dakar to Nairobi. The lecture was illustrated throughout by cine-films, many in colour, and attracted a large and appreciative audience.

Private demonstrations were a feature in 1937 while talks on archaeological matters by Dr Leakey proved very popular. Material augmented and re-arranged by Dr and Mrs Leakey now stood as the finest of its kind in any museum. The geological collections were increased by a series of stone implements and pot fragments donated by Mr H.S. Montague of Kiambu and also by a valuable collection presented to the Society by Archdeacon Owen.

The general study collections were proving useful to many people and government departments. Captain C.H.B. Grant and members of the ornithological section of the British Museum (Natural History), Mr Moreau of the Agricultural Research Institute at Amani, Tsetse Research officials and the game department were some of those who made use of the facilities.

Mr Gedye, a long-standing member of the Society's committee continued his valuable assistance in the entomological section and also undertook the work of librarian on a very small honorarium. Financial stringency did not permit a full-time librarian and the essential work of subject card indexing could not be continued.

In this way the Society endeavoured to carry out the objects and intentions of the memorial to Sir Robert Coryndon. Closely connected with finance was the question of future organisation of the museum. Consequent on criticism made earlier, the Society had called for a Committee of Enquiry. This was appointed by His Excellency the Governor in April 1937 and evidence was taken during June. Its report formed the basis of discussion at a special general meeting on 29th October when evidence previously approved was put before the

enquiry committee by the Society's representatives, Messrs H.H. Slade (Hon. Solicitor), Daubney, Leakey, Copley and van Someren. This same sub-committee was empowered to negotiate with government on the basis on which the assets of the Society could be assigned. After considerable discussion the government approved the re-organisation which provided for the establishment of a legal charter under which a board of trustees and a board of management were to be nominated. The Board of Trustees was to assume control of the museum. During the interim period which would elapse before the required machinery could be brought into being, the Society agreed to carry on the management of the museum on a minimum contribution, from outside the Society's revenue, of £1,700. Government agreed to draft the necessary legislation.

The Society would thus eventually surrender control of the museum and its scientific collections, but representation on both the board of trustees and management committee was assured. The Society had nursed the museum from infancy to a state of growth, when, for economic reasons it was necessary for the state to assume control. Appreciation of the personal interest taken by the Governor throughout the negotiations was placed on record. Special thanks were recorded to Mr Humphrey Slade for advise and opinions on legal matters connected with the re-organisation, and to Mr Gould for his services as treasurer. The balance sheet and financial statement for 1937 indicated a strong position regarding assets and showed that the Society's activities were being conducted on sound economic lines.

The patience showed by the Society was rewarded to some degree. Towards the end of 1937 funds were made available for field work, particularly in connection with botany. This included the £500 donated by Mr Campbell. At the time of receiving this gift no botanist was attached to the museum but every effort was made to persuade those who "held the public purse strings" that a botanist was very necessary and Mr P.R. O. Bally was appointed to the post early in 1938.

The area of the Chyulu Hills which was virtually unexplored, was the natural choise for this long-awaited field work. The hills lie west by south of Kibwezi and north west of Kilimanjiro, the Kibwezi plains with their extensive laval flow lying on one side and the much lower plains of Loitokitok lying on the western side. The hills form a compact, continuous chain of roughly 30 miles and it was reported that evergreen forest existed on the heights of the range, in marked contrast to the plains vegetation surrounding them. The members of the expedition included Mr Bally, Mr Allen Turner as general field assistant, Dr van Someren and his son Desmond, a staff of trained African assistants and several porters. Mrs Bally,

now Mrs Joy Adamson, joined the party later. The expedition took place between April and July 1938. Much arduous work was carried out in very wet and cold conditions in this unknown area, despite lack of permanent water, tracks or safe camp sites and brushes with elephant, rhino and buffalo, as well as smaller game.

Science benefited by over 1,300 botanical specimens, numerous photographic records, native names of plants and soil samples. Meteorological data was recorded and many coloured drawings of plants were beautifully drawn by Mrs Bally, whose work under her name Mrs Joy Adamson is now world renowned. Over 1,800 birds and mammals were recorded, reptiles, anpbibians and entomology benefited by 14,664 specimens.

The expedition was fully written up in several Journals, including "Museum's Expedition to Chyulu Hills. A General Narrative" by V.G.L. van Someren, which contained a well illustrated map, "The Birds of the Chyulu Hills" by V.G.L. van Someren, "The Butterflies of the Chyulu Hills" by the same author, "Some Vegetational and Botanical Notes" by P.R. O. Bally and others too numerous to mention. Some of these are still available from the Society and make very interesting reading both to the professional and amateur scientist. After the expedition a special vote of thanks was accorded to Mr MacArthur for his help in its organisation; to Mr and Mrs A.B.C. Smith who did much in forwarding supplies and arranging porterage, and to unnamed others whose assistance was much appreciated. The Chyulu Hills are still vastly attractive, and the Society has arranged several camps there for its members, and will continue to do so.

From a very unpretentious start, the Society had made great advances and throughout nearly 30 years there had been no retrogression. 1938 was no exception and definate progress was made in many directions.

Distinguished visitors during the year included Their Royal Highnesses the Duke and Duchess of Gloucester and Lord and Lady Baden-Powell. Government and municipal grants were kept to the promised level and the Society was asked to manage the museum until the end of January 1939 to allow the appointment of a Board of Museum Trustees of Kenya under the new ordinance. The cessation of museum activities necessitated re-organisation of the Society's constitution which was drawn up and submitted for approval. As a result of negotiations the Society handed over all its museum assets except the library, in return for an annual payment of £100 for 15 years.

The sum represented about a tenth of the estimated value of the assets so transfered, but the Society did this willingly

in order to give every assistance to the new trustees in building up the museum services. The Society for its part retained the right of free use of the museum for all its members, including the right of access to the workrooms and study collections. The Society was also granted the right of nominating two members to the board of trustees, such members to represent "Scientific Interest". The use of one room in the museum was given to house the Society's valuable library, and members had free access to it at all normal times. Dr V.G.L. van Someren became the first director of the museum.

The Society was, of course, to continue its other activities, such as the organisation of meetings and the publication of the Journal which had gained a worthy reputation in the scientific world. It still retains a great interest in the museum services as a whole; all meetings are held there and the Society now has an office within the museum building from which the day to day affairs are run on a voluntary basis.

Now that the Society no longer had the burden of administrating the museum the time seemed right to start on a more active programme. Dr Leakey, as a member of the committee, proposed that a series of lectures or discussions be started. In order to start the ball rolling he offered to give the first in the series, this was accepted with alacrity. A sub-committee was formed to look after details and prepare a syllabus. A functions sub-committee, under the able leadership of Mrs A.L. Campbell, continues today.

At the close of 1939 Dr van Someren found it necessary to resign from the office of Vice-President of the Society thus severing a connection which had been continuous for 27 years. He had taken a major part in building up the Society and the development of the museum.

War years were again descending on the world and conflict between the warring nations during the following years would take its toll of millions of human lives, leaving unthinkable devastation in many parts of the world. Human resiliance being what it is, the Society fought back and made every effort to forge ahead during these difficult years.

At the Society's Annual General Meeting in January 1940 Mr Beresford-Stooke was elected President, with Sir Charles Belcher as the Vice-President. Mr Cunningham-van Someren became the Secretary and treasurer and also took on the editorship of the Journal for a while. Mr G.R. C. van Someren, curator of Ornithology at the National Museum is well known to past and present members for his ready help and advise on a wide range of subjects. Over the years he has contributed articles of interest to the Journal and Bulletin.
(Note: May/June 1979 Bulletin p. 60 Miss Napper should read Miss Napier. Ed.)

CONGRATULATORY LETTERS TO THE SOCIETY

Dear Mr Karmali,

The Trustees, Director and staff of the British Museum (Natural History) congratulate the East Africa Natural History Society on attaining its seventieth birthday on 25th March 1979.

The Museum has noted with pleasure the continuing activity of the Society, manifest most recently in the publication of ornithological material which it anticipates will be of particular value to students of East African avifauna. Present Museum officers have enjoyed membership of the Society in the past.

We send the East Africa Natural History Society best wishes for success and prosperity in future years.

Yours sincerely, R.H. Hedley, Director.

Dear Mr Karmali,

On behalf of this Society I would like to send you and to all your members our congratulations on the 70th anniversary of the founding of the Natural History Society and we wish you all the greatest success and prosperity for the future.

Yours sincerely, Michael J. Sawyer, Executive Secretary, East African Wild Life Society, Nairobi

Dear Mr Karmali,

Your letter of December 4th 1978, announcing the 70th anniversary of the East Africa Natural History Society has been duly received here. I want to present you with the congratulations of the National Museum of Natural History (Rijksmuseum van Natuurlijke Historie), Leiden, Netherlands, hoping the celebration of this anniversary, announced in your letter, will be a success.

Since the foundation of the East Africa Natural History Society our Museum has been in contact; some of our staff members are also members of your Society and as several of our scientists have been actively engaged in research in Kenya there have in the past, been many problems of communal interest. I do wish the Society will carry on to flourish for a long time to come !

Please keep us informed of the publications mentioned in your letter; our ornithologist, Dr G.F. Mees is very much interested and we would not like to miss acquiring those books for our library. Yours very sincerely, Prof. Dr. W. Vervoort, Director

Sehr geehrter Herr Präsident !

Am 25. März 1979 feiert "The East Africa Natural History Society" ihr 70jähriges Jubiläum. Gastatten Sie mir, Ihnen und der verdienstvollen Gesellschaft zu Diesem schönen Fest die harzlichsten Glückwünsche des Staatlichen Museums für Tierkunde Dresden auszusprechen.

Ich wünsche der Gesellschaft weiterhin so erfolgreiche wissenschaftliche Arbeit zum Wohle der Wissenschaft und zum Ruhme Ihrer Heimat. Ihrer Feier wünsche ich ein gutes Gelingen und Ihnen und der Mitgliedern der Gesellschaft Gesundheit und weitere Erfolge !

Mit dem Ausdruck grösster Hochachtung. Dr Hertel, Direktor.

Dear Mr Chairman,

On behalf of the Entomological Society of Egypt, I would like to congratulate the East Africa Natural History Society on being 70 years old.

For a scientific society to survive for 70 years in the face of many adversities is an achievement in itself. The most fascinating aspect of your Society, however, is that perhaps you are the most active and best known natural history group in an area of the world which is considered to be one of the last havens of wild life left on our planet for this generation and for future generations to love and cherish.

Let us hope for many occasions to come to congratulate you for your advancement and activities, and for a more solid cooperation between you, our Society, and all similar organizations in our area for the benifit of our countries, our continent and for humanity as a whole.

Best wishes and many happy returns. Sincerely yours Dr Mahmoud Hafez, Professor of Entomology and President, Entomological Society of Egypt.

Dear Mr Karmali,

Thank you for your letter of 17th January 1979 which I read with much interest.

On behalf of the Chairman, Executive Committee and Staff of this Association I wish the East Africa Natural History Society everything of the best in its future endeavours.

Yours sincerely, P.F. Berry, Acting Director, South African Association for Marine Biological Research, Durban, South Africa.

Dear Mr Karmali,

Congratulations to the East Africa Natural History Society from the Cleveland Museum of Natural History on the occasion of the 70th anniversary of your founding !

We are most interested in the publications you have forthcoming in celebration of your anniversary year. Would it be possible for us to receive copies of Breeding Seasons of East African Birds by Leslie Brown and Peter Britton, and The Birds of East Africa compiled by your Ornithological Sub-Committee for possible review in our quarterly natural history publication, the EXPLORER magazine ?

Again, congratulations to you on your good and successful work.

With warm regards, Dr Harold D. Mahan, Director

Dear Mr Karmali,

Thank you for your letter of 1979-01-17 informing me of your Society's 70th Anniversary. Our Institute celebrated its 75th Anniversary last year, therefore we appreciate the importance and significance of such an event. It is a time for looking back at past achievements and looking forward to the future. And, judging from your excellent Journal to which we have subscribed since its inception, your Society has much to be proud of and will undoubtedly continue to flourish

Congratulations on reaching this important milestone and our very best wishes for the future.

Yours sincerely, B. de Winter, Director, Botanical Research Institute, Pretoria, South Africa.

Dear Mr Karmali,

May I extend to the East Africa Natural History Society, on behalf of the Royal Society of New South Wales, congratulations on your Society completing its 70th year. We trust your celebrations will be a success, and we wish you a successful future.

Yours sincerely, F.C. Beavis, President.

Congratulations on your 70th Anniversary and past achievements Stop Best Wishes continuing success Stop Zoological Society of London.

Dear Mr Karmali,

It is a great pleasure for me to receive the news that your Society is preparing to celebrate its 70th Birthday !

Our two institutions were and are always very strictly related.

We have in our zoological collections a good representation of East African specimens collected by our old explorers, that often are examined by some of your fellows; on the other hand we remember with pleasure that a good contribution for the establishment of the Nairobi Museum was given just by some Italian soldiers, at that time prisoners of war in Kenya.

Your Society was always a landmark for all questions concerning East Africa; your lot of publications of these seventy years is the most tangible proof of your activity.

All the staff of the "Museo Civico di Storia Naturale G. Doria" is glad to can share your joy in this occasion.

With my best wishes for the future, Sincerely yours,
Dr Lilia Capocaccia, Director.

Dear Mr Karmali,

At the Council meeting of our Society held on 22 January we unanimously approved the following message to your Society. "The Southern African Ornithological Society sends sincere congratulations and greetings on the occasion of the seventieth anniversary of the East Africa Natural History Society.

The collaboration between your Society and ours through the exchange of Journals and the personal contact between members has been of great value to our Society and we hope that it will continue and grow stronger during the coming years".

Our own Society's Fiftieth Anniversary will be celebrated during 1980 so it seems that you beat us by more than a short head.

Yours sincerely, Donald T. Fabian, Chairman.

Societas Entomologica Helsingforsiensis wishes the jubilating Society all good and continuous success Stop Harry Krogerus Walter Hackman

(More letters of congratulation will be published in the next two Bulletins. Ed.)

THE TALE OF TWO SWIFTS

On 15th April 1979, a nest containing two young White-rumped Swifts, Apus caffer, was knocked down from a house in Nairobi. It contained two young birds which were handed to me to see if I could rear them. Dennie Angwin, Secretary of the Society, helped in this task.

When they were first seen they were very dark gray in colour with much lighter grey lines across the top of the head, caused by the lighter edging to those feathers. These lines were kept all the time we had them. The almost jet black wings just reached the white rump and the black tail was blunt tipped. Both the birds smelt of good quality tea and were promptly named Lapsang Souchong and Earl Grey ! Lapsang, as he was known to his friends, was the larger of the two birds when we received them.

On the day they arrived, we quickly gave them glucose water, a few drops at a time, to bring them over shock. This was mixed up so that the sweetness could just be tasted. Care had to be taken in this and later force feeding, as the beak bends in the middle in very young nestlings and could very easily be broken. A thumb nail was slid into the side of the beak and then gently levered so that the lower mandible dropped. The tongue had to drop into its groove or the food and glucose water would not go down the throat. When the tongue was down anything placed at the back of the throat would be swallowed. When it was necessary to give them a boost of energy later, we dipped their food into glucose water.

The main food supplied was large numbers of two species of grasshoppers common around Nairobi; Morphacris fasciata, the large red-winged species, and a species of Parathisoicetrus probably brevipennis which has a white front to the head and the adult male has short wings and a blue body. In both cases we tried to give the birds adult females which were both large and full of eggs. With both species of grasshopper we removed the strong back legs, and with very large specimens we broke them into several parts to make them more manageable for the birds. We tried to vary the diet as much as possible with other insect food, mashed flies were particularly welcome, though small butterflies and antlions were not scorned.

We nearly had a fatal accident with Lapsang near the start of rearing. We found a hatch of termites and collected a large number for future use. We fed these to both birds for three meals before we noticed that Lapsang was not very lively. We immediately returned to the normal diet of grass-hoppers with their wings still on (for roughage), and he slowly improved. We were able to monitor his progress by

watching his droppings which were very liquid at his lowest point. Both birds were checked routinely in this way as they normally voided when they were picked up at feeding times. Later we discussed what we had done wrong and realised that in the wild the parents would only be able to collect termites over a very short period and that we had overfed them on a very rich diet. Lapsang was never the same again and was overtaken in development by Earl Grey.

Food was given to the birds once an hour, from nine in the morning till six at night, with the feed at one o'clock being omitted. This was an attempt to simulate the parent's feeding pattern as much as possible and proved to be successful. Each feed consisted of at least five grasshoppers for each bird in the 1.5 to 2 cm range, or their equivalent, leaving out those that were obviously distasteful. We increased to meals before a break; those at twelve and six being slightly larger. This made a total of about 50 grasshoppers per bird per day, or 100 for the two ! The total for the whole period came to approximately 4,850 grasshoppers - this should be borne in mind if the successful rearing of these birds is attempted. We did not use any 'artificial' foods such as raw meat or boiled egg, but kept strictly to insects.

About half way through the rearing period, Lapsang started on taxiing trials along the floor and soon afterwards could fly quite well, though he was slow enough not to damage himself against the closed windows. Earl Grey just decided to fly one day, and off he went on a flight of about 30 metres. These flights were much more common when the birds were hungry (at lunch time and early in the morning) and this is possibly the trigger to get them to leave the nest. Lapsang was never as good at flying as Earl Grey, but he doggedly worked at improving his technique and would repeatedly fly from the nest box, only to be caught, replaced in the box, then a few minutes later off he would go again.

On the health side, other than the problem with the termites, both birds seemed remarkably fit. Earl Grey had one of his toes broken in the nest fall. A dab of antiseptic cream at each feed for a few days stopped infection and the toe finally dropped off leaving him none the worse for his loss.

After we had had the birds a very short time, Earl Grey would open his beak for food when we approached but it took some time for Lapsang to associate us with food. While feeding, Earl Grey kept up a continuous twitter until his crop was almost full; Lapsang was comparatively silent. They often fought each other in the nest box, particularly just after they had been fed. If the two were fed in the nest box they

would both try to get into a dominant position, and thus get all the food. As Lapsang was the larger bird for quite half the time we had them, care had to be taken that Earl Grey received his fair share.

Plumage changes were minor, consisting of the feathers of the wings almost doubling in length, the tail forking by the outer feathers lengthening and the back changing from the dark grey to a lovely sooty black.

On 30th May, six weeks and four days after we had started, Earl Grey found an open window in the morning and disappeared. Though Lapsang was given the chance of freedom the following day, he did not take it. Several wet days then came, so he was not released. On 3rd June, while we were manning the Society's stand at the 50th Anniversary Festival at the Museum, we gave him a very large grasshopper. He just about swallowed it and appeared to be all right. That night he was not very well, and a warm hot water bottle was placed under his box to keep him warm. He continued to go downhill all the next day and died that evening, seven weeks and two days after we had received him. He was put into the Museum's deep-freeze for skinning and we hope to have an autopsy done to find out if that large grasshopper caught in his gut; we think that was the cause of death.

Two further points of interest on these birds, Swifts are said not to be able to raise into the air from a flat surface. Our two did so with ease, in fact most of the flights started from the floor and the wing tips did not appear to touch the floor at all. Both the birds in completing this feat hunched their backs and the wings seemed to be much more curved from front to back than in normal flight - I suppose to give them more lift as they rose almost vertically at first.

The other point concerns the Feather Lice, Mallophaga, found on both birds. These were seen at times crowded round the eye and they were a dirty white colour. If an attempt was made to catch them they dodged quickly back into the head feathers. Despite this, several were captured for future study. When Lapsang started to grow weak, about the middle of the afternoon, the Mallophaga were seen to be full of blood and were rounded in shape, finding it difficult to hide in the feathers - a number were caught. This change in feeding behaviour must be an adaption to enable the Mallophaga to survive a period without food in the hope of finding a new host.

Mike Clifton, National Museum, P.O. Box 40658, NAIROBI

A TRIP TO LAKE BOGORIA

During November 1978 we went for a weekend safari to Lake Bogoria, Kenya, to see the thousands and thousands of flamingoes there. The water level was very high making the road on the eastern shore impassable. From the main gate you could drive along the western shore only in a vehicle with high clearance, two water inlets were carrying a lot of water too. The hot springs were partly submerged, but we found a good place to put up camp. The scenery was exciting as everyone who has been there knows; bird life was abundant. We went out for a short walk along the shore, thus causing the birds to move away and take off. But we noticed one Lesser Flamingo, Phoeniconaias minor being left behing, it could hardly move, the head was bent down touching the water, and it was staggering through the shallow water very slowly.

When we returned about fifteen minutes later, we found the bird floating dead near the shore, pulled it out and examined it. No external damage could be found, only a lot of feather mites striped black and white like little zebras were running swiftly through the plumage. The specimens we collected managed to escape from the bottle, so we could not identify them.

On postmortem the carcase presented an acute peritonitis, it was in good condition, the strikingly coloured fat covering the muscles. The left part of the abdominal cavity was clean whereas the right side was covered with a brownish mass which did not smell rotten. This, we found out, was obviously caused by a puncture in the intestines. After removing them we detected two small holes, about 5 mm long, which were not cut with the knife while opening the carcase. (Another vet whom we asked about it mentioned that a certain parasite in pigs is known to sometimes cause this type of damage, it is known as the thorny headed worm, Macracanthorhynchus).

We did not take any samples, not did we do a complete pm, since we did not have any formalin or ice with us, and it was a very hot day.

Fortunately we managed to see a herd of one male and six female Greater Kudu, Tragelaphus strepsiceros, as they were coming down to the lake for water on the opposite shore. During the day we watched a Silverbird, Empidornis semipartitus which was hunting from one and the same branch for about an hour. This was very exciting for me, since I had never seen one before.

Annemarie Lohding, P.O. Box 191, KERICHO, Kenya

POSSIBLE INTERACTION OF LIONS, CHEETAHS, VULTURES AND TOURIST VEHICLES IN AMBOSELI

On a recent visit to Amboseli National Park, Kenya we observed an interesting association of animals and tourist vehicles which may affect the feeding success of different species. The sequence began when we noticed two large male lions crossing the open plain near Amboseli Lodge to where several female lions had made a fresh wildebeeste kill. With much roaring and clawing, the males promptly drove the females off the kill and proceeded to wrestle over the carcase, leaving the females and several young lions watching from a respectful distance of about 100 metres.

Leaving this scene, we drove around a nearby grove of trees, perhaps 100 metres away and well out of sight from the lions. Here, in tall grass, we found a female cheetah with three young feeding on the fresh remains of a Thomson's Gazelle. At the time we discovered them there were no vultures visible anywhere in the vicinity. Within three minutes of our stopping, however, the first White-backed Vulture arrived and landed on the ground about 20 metres away. This was quickly followed by several others, who either landed on the ground or in nearby trees. Within ten minutes at least twenty vultures had appeared.

Suddenly, without any warning, the cheetahs rose from the half eaten carcase and bolted for the woods. Almost instantly, the vultures descended in a mass on the remains. About 30 seconds later, the females lions and their cubs appeared around the corner of the thicket running at almost full speed. They immediately dispersed the vultures and proceeded to finish off the carcase.

From the rapid sequence of events, one can conclude only that the vultures were attracted to the cheetah's kill by the presence of our cars, that the lions saw the rapid movement of vultures and came running, and that the cheetahs heard or smelled the lions coming and bolted away from the carcase. That the vultures had not found the kill on their own was indicated by the fact that the carcase was at least half eaten and no vultures were present when we came upon it. To the extent that cheetahs rely on the tall grass to hide their kills from lions, the presence of observers such as ourselves may unwittingly reduce their ability to consume their prey. This would in turn mean either that they have to spend more time hunting to get the same amount of food or that their success rate in raising their young is reduced.

John Gerhart, P.O. Box 41081, NAIROBI

UNUSUAL FEEDING HABITS OF HAMMERKOP, SCOPUS UMBRETTA

While based at Mtwara, 10° 39'S, 39° 18'E, southern Tanzania, during July 1978, I regularly observed Hammerkops feeding on fish offal and scraps. Each afternoon the local fishermen would meet at a place on the beach where they would prepare their day's catch for sale. This always attracted a crowd of people, some buyers, some just 'lookers on'.

In spite of all this activity, two pairs of Hammerkops, each with one large young would boldly walk amongst the crowd and eagerly feed on any offal and scraps thrown down by the fishermen. They were quite fearless of the fishermen, walking among them in their efforts to obtain food. It was noted that the local African Kites, Milvus migrans, only managed to capture odd scraps that were thrown farther from the crowd.

During the day the same Hammerkops were usually observed feeding quite normally in rock pools.

Recently I also observed a single Hammerkop feeding on the corpse of a small animal killed on the Arusha to Moshi road, northern Tanzania. Several days later near the same spot I again observed a Hammerkop feeding on a road kill, this time a small puppy.

I have been unable to find any other reference to Hammerkops feeding in either of the two manners described above.

D.K. Richards, P.O. Box 30750, NAIROBI

WEEKEND EXCURSION TO SALT LICK LODGE

Lise Campbell had booked 60 people in for the weekend of 1st/2nd June 1979 to Salt Lick Lodge, Kenya and it certainly sounded as though there were that many ! Many of the regular campers were present and we were pleased to see other members who never appear on camping trips. From the various comments made we assume that most people found the Lodge comfortable and the service good. For ourselves, we must praise the staff who worked hard at serving and pleasing despite the fact that they obviously needed more than were present.

Unfortunately the continual rain eliminated the pleasure of game from the Lodge as apart from the usual Defassa Waterbuck, Impala and a small herd of five Elephant, the animals obviously preferred to go elsewhere. A great deal of excitement was shown when a Pearl-spotted Owlet was heard from the rooms. After careful searching of the nearest trees, he was discovered and observed for some time.

Two other animals watched from the Lodge were the African Civet and the Small spotted Genet. The Civet was too busy catching mosquitoes etc. by the lily pond to take a lot of notice of the spectators. Numerous other small mammals and birds were also observed. I was particularly pleased to see the Woolly-necked Storks and the very large numbers of White-browed Coucals who appeared to inhabit every bush around.

On the Staurday it was decided that most of us would drive through Tsavo National Park to Lake Jipe and, although it was still raining, off we all set. Most of the drive was on very good roads and no problems occurred. However, there was a small piece of track that had a good mudhole in and through we all drove in good Rally-driving tradition!

The majority of us then took to our feet and wandered around the Lake edge, looking at the numerous foot prints and bones, trying to decide what species they belonged to, and probably most of us were very wrong. There were quite a number of Malachite Kingfishers to be seen and various herons, namely Grey, Goliath, Squacco and Purple. Also Spoonbills, Water Thicknees and various others were seen. We were fortunate to see some Open-billed Storks perched with Great White Egrets in a tree by the Lake. It made a very striking picture. This was the first occasion we had observed the Open-billed Stork. There were various small groups of game to be seen on the drive down and back. Amongst these we watched a small group of Gerenuk feeding.

In the vicinity of Lake Jipe was a large pride of Lion, which, as far as we are aware, none of us saw. Only the evidence of their having been there. Also in this part of the Park was a large herd of Elephant. All of us must have seen the evidence on the drive down but only a fortunate few of our party had the opportunity to see them. They described a mixed herd of well over a hundred animals - surely a rare sight in present times when herds seem to be getting smaller and smaller.

As far as we know only two parties were stuck in the mud, both of whom had driven off the road; one of them was ourselves ! Still it wasn't for too long and not entirely without it's funny side.

On the return drive a Lesser Kudu was seen just outside the Park and nearly everyone was to see a lovely Black-backed Jackal playing in the road with a mouse and apparently undisturbed by the 'constant stream' of traffic on it's way back to Salt Lick and a sundowner. When comparing notes during the evening Lise Campbell was greatly excited by the fact that she had seen an African Wild Cat - her first, and very probably,

due to it's small numbers or capacity for hiding, her last.

When awakening on Sunday morning, a low whirring noise could be heard and on investigation it was discovered that the entire Lodge, ourselves included when stepping outside, was covered with 'hoppers'. Most of us took small drives into the surrounding area or up to Lion Rock before starting off home.

Our final bird list for the weekend comprised some 77 species of which two were new to me. If any one else on the trip kept notes would they please let me have a copy in order to compare.

We would like to thank Lise very much for a splendid weekend of which the only disappointment was that we were in the shadow of the lovely Mount Kilimanjiro and she stayed hidden behind the clouds the entire weekend.

Elizabeth and Robin Myall, P.O. Box 54904, NAIROBI

CONTENTS OF SCOPUS - THE QUARTERLY ORNITHOLOGICAL JOURNAL PRODUCED BY THE E.A.N.H.S.

Volume 3(1) March 1979

Stephanie Tyler. Bird Ringing in an Addis Ababa garden

Robert E. Hegner, Stephen T. Emlen, Natalie J. Demong and Carolyn E. Miller. Helpers at the nest in the White-fronted Bee-eater

G.C. Backhurst and D.J. Pearson. Southward migration at Ngulia, Tsavo, Kenya, 1978/79

Short communications:

Guenther Groh. Little Gull *Larus minutas* at Lake Turkana: a new bird for Kenya

Larry T. Schwab. Some nesting data on the Nyanza Swift *Apus nianzae*

D.A. Turner. Greenbuls of the Taita Hills, S.E. Kenya

W.G. Harvey. Red-tailed Greenbul *Criniger calurus* in Tanzania

K.M. Howell and C.A. Msuya. Bare-eyed Thrush *Turdus tephronotus* from the Selous Game Reserve

B.S. Meadows. Preliminary report on the January range and abundance of Palaraectic ducks in East Africa

Volume 3 (2) June 1979

D.A. Turner and D.A. Zimmerman. Field identification of Kenya Greenbuls

D.J. Pearson and B.S. Meadows. Lesser Spotted Eagles *Aquila pomarina* in Kenya during 1978/79, with comments on the identification of the species

P.L. Britton. Notes on the birds of Lengetia Farm, Mau Narok, from the diaries of the late P.H.N. Sessions

Short communications :

P.L. Britton and H.A. Britton. Phalaropes in coastal Kenya

A.L. Archer. Somali Bee-eater Merops revoilii in Tsavo West

D.J. Pearson and G.J. Jobson. River Warblers in song in Kenya

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The owner bought the equipment in Germany in 1975, items numbers 1 and 2 are used, number 5 is modiefied and used, items numbers 3 and 4 are new. Every piece is very well looked after and therefore is in excellent condition.

Please contact : Miss Annemarie Lohding, P.O. Box 191, KERICHO, Kenya

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Birds of Eastern and North Eastern Africa Series 1 Vol. 1 (1952) and Vol. 2 (1955)

Gardening in East Africa Jex Blake 4th Edition (1957)

Please contact : L.V. Baly, P.O. Box 10, LIMURU, Kenya or phone Tigoni 230 (when its working !)

SOCIETY NOTES

Library Hours These have been reviewed and the hours of opening are : weekdays 8 am to 12.30 p.m., 2 p.m to 5 p.m. Saturday mornings 9 a.m. to 12 noon. Hope to see you!

Bird Check Lists now available from the Society's office or the Bird Room, National Museum. Price : Shs 1/50 each.

Lifts on Trips We very much regret that no member of the Committee of the Society is in a position to arrange lifts for any of its members wishing to take part in Society trips. These must be arranged between the members.

Wednesday morning Bird Walks continue. Please meet in front of the National Museum, Nairobi, Rain or Shine ! Beginners and students welcome (lifts available). These walks usually last two to three hours and are led by Mrs Fleur Ng'weno.

NEW MEMBERS

The following new members have been elected :

Local Full Members

Mr and Mrs John Carver, Juja Farm, Private Bag, P.O. RUIRU, Kenya
Mr M.S. Christensen, P.O. Box 59145, NAIROBI
M.A.C. Coverdale, P.O. Box 36, UKUNDA, Mombasa, Kenya
Mr William Davison, Dept. of Veterinary Anatomy, P.O. Box 30197, NAIROBI.
Mr O.M. Fowler, P.O. Box 18, LIMURU, Kenya
Mr Charles Hayes, P.O. Box 14040, NAIROBI
Mr Goran Hyden, Ford Foundation, P.O. Box 41081, NAIROBI
Ms Mary McClelland, P.O. Box 30261, NAIROBI
Mr B.W. Oduor, P.O. Box 59816, NAIROBI
Wazir Okera, UNEP, P.O. Box 47074, NAIROBI
Mr and Mrs Helmut Schmidt, P.O. Box 25208, NAIROBI
Mr Mathews Sigei, Standard Bank, P.O. Box 72585, NAIROBI
Mr John G. Stephienson, P.O. Box 30592, NAIROBI
Mr and Mrs P.W. Trueblood, P.O. Box 30437, NAIROBI
Mr P. Upperton, P.O. Box 30194, NAIROBI
Mrs Pauline Wyllie, Deloittes & Co., P.O. Box 45992, NAIROBI
Mr Truman Young, P.O. Box 75, NARO MORU, Kenya

Local Half Year Members

Mr Iain A. Carmichael, c/o Davson & Ward, P.O. Box 46611, NAIROBI
Mr R.E. Waghorn, P.O. Box 30638, NAIROBI

Local Junior Members

Jane Hyden, P.O. Box 41081, NAIROBI
Michael Hyden, P.O. Box 41081, NAIROBI
Bijal R. Shah, P.O. Box 41521, NAIROBI
Sheneleep Shah, P.O. Box 40551, NAIROBI

Local Institutional Member

Amboseli Primate Research Project, P.O. Box 18, NAMANGA, Kenya

Overseas Full Members

John Collins, Warden, Litton Mills Field Study Centre, Litton Mills, Buston, Derbyshire, SU17 8SR, U.K.
Dr R.L. Fleming, P.O. Box 229, KATHMANDU, Nepal
Mrs W.G. Raw, 18A 4th Ave., Melville, JOHANNESBURG, South Africa
Prof. Dr H. Rehder, Institut fur Botanik und Mikrobiologie, Tech. Universitat Munchen, Arcisstr. 21, D 8000 Munchen 2, West Germany
Valentina Roselli, Borgo S. Czoce 6, FIRENZE, Italy
Mr C. Tomisich, 83 Augustine Terrace, Glenroy, Melbourne, Australia 3046

Overseas Life Member

Mr Zul Bhatia, 34 Greenend Road, Bedford Park, LONDON W4 1AJ

SOCIETY FUNCTIONS

Please note dates for September as the next Bulletin may be late

Monday 9th July 1979 5.30 p.m. at the Museum Hall, Nairobi Mr S. Stephenson will give an illustrated lecture on "The Wild Life of Ethiopia".

Sunday 15th July 1979 Day excursion to Kikuyu Escarpment Forest. Leaders : Mike Clifton and Mike Gilbert. Botany and insects will be studied as well as high-level birds. Please meet at the flyover (over the road) near the end of the Uplands/ Longonot Highway at 10am sharp to give time for any mist to clear. Members are asked to be particularly careful on the road if it is misty. Please bring a picnic lunch if you wish to stay during the afternoon and warm clothes as the Forest is over 2,300m high !

Monday 13th August 1979 5.30 p.m. at the Museum Hall, Nairobi Mr Jens Høgel, Chief of U.N.E.P. Desertification Unit will give an illustrated lecture on "What does UNEP do about desertification ?"

18th/19th August 1979 Weekend field meeting by kind invitation of Miss A. Joyce of Konza. All camping equipment, food and drinking water should be brought. Members wishing to take part in this field meeting should fill in the enclosed camp slip and return it, with a stamped addressed envelope to MISS D. ANGWIN, P.O. BOX 44486, NAIROBI (as Mrs Campbell is away) before 9th August. Details will then be sent.

8th/9th September 1979 Weekend field meeting at Njoro by kind invitation of Mrs L. Hindmarsh. Details for this trip are the same as for the August meeting. Please fill in the enclosed form and return it, with a stamped addressed envelope (seperate from the above) to Mrs A.L. Campbell, P.O. Box 14469, NAIROBI to reach her before 20th August 1979.

Monday 10th September 1979 5.30 p.m. at the Museum Hall, Nairobi Mr Ken Bock will give an illustrated lecture on "An Introduction to Coral Reef Fish". This will be a follow-up of the very popular lecture Mr Bock gave in April on the Coral Reef.

Monday 8th October 1979 5.30 p.m. in the Museum Hall, Nairobi Mr Chris Hillman will give an illustrated lecture on "Eland".

20th/21st October 1979 Weekend field meeting by kind invitation of Mrs P. Scott of Chemomi Estate, Nandi Hills to study birds. Details later.

24th/25th November 1979 Weekend field meeting to the north Naivasha area. Details later.

PLEASE NOTE : Camp slip for the August meeting to be sent to : MISS D. ANGWIN, P.O. BOX 44486, NAIROBI
for the September meeting to : Mrs A.L. Campbell, P.O. Box 14469, NAIROBI.

THE EAST AFRICA NATURAL HISTORY SOCIETY

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Joint Library Sub—Committee (Society representatives) Dr J. O. Kokwaro, M.P. Clifton.
Functions Sub-Committee Mrs A. L. Campbell, Mrs E. B. Angwin, M. Gilbert.

MEMBERSHIP

This offers you free entry to the National Museum, Nairobi; free lectures, films, slide shows or discussions every month in Nairobi; field trips and camps led by experienced guides; free use of the Joint Society-National Museum Library (postal borrowing is also possible); reciprocal arrangements with the Uganda Society's Library in the Uganda Museum, Kampala; family participation: wives and children of members may attend most Society functions; one copy of the *EANHS Bulletin* every two months; a copy of each *Journal* published during your period of membership; the Society controls the ringing of birds in East Africa and welcomes new ringers and runs an active Nest Record Scheme; activities such as plant mapping and game counting are undertaken on a group basis. Membership rates are given at the foot of this page.

JOURNAL

The Society publishes *The Journal of the East Africa Natural History Society and National Museum.* Each issue consists usually of one paper, however, sometimes two or more short papers may be combined to form one number. The aim of this method of presentation is to ensure prompt publication of scientific information; a title page is issued at the end of each year so that the year's papers may be bound together. Contributions, which should be typed in double spacing on one side of the paper, with wide margins, should be sent to the Secretary, Box 44486, Nairobi, Kenya. Authors receive twenty-five reprints of their article free, provided that these are ordered at the time the proofs are returned.

E.A.N.H.S. BULLETIN

This is a duplicated magazine issued six times a year, which exists for the rapid publication of short notes, articles, letters and reviews. Contributions, which may be written in clear handwriting or typed, should be sent to The Editor (*EANHS Bulletin*), Box 44486, Nairobi, Kenya. Line drawings will be considered if they add to the value of the article. Photographs cannot be published.

SCOPUS

The Ornithological Sub Committee publishes this quarterly bird magazine. Cost: EANHS members KShs. 50/- p.a., non-EANHS members KShs. 75/- p.a. All correspondence to D. A. Turner, Box 48019, Nairobi, Kenya.

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NOTES FOR CONTRIBUTORS

Members of the Society (and non-members) are asked to follow these simple instructions when writing articles or letters for submission to the *Bulletin*. The *Bulletin* is presented six times a year in a duplicated format: the paper size is 20.5×23 cm (10×8 inches), line drawings can be reproduced but the area should not be more than 17.5×23 cm. Lettering on figures should preferably be in 'Letraset', neatly done in Indian ink or left blank: if the last method is followed, the lettering should be indicated on an overlaying sheet and should *not* be done on the figure. Figures should be prepared on good quality white writing paper and not on Bristol Board or other thick material. Whenever plants or animals are mentioned the scientific name should also be given but not in parenthesis. Trinomials should not be used unless there is good reason to do so. Author's names of species are not required.

Contributions may be typed (preferably) or written clearly and should be sent to: M. P. Clifton, Box 44486, Nairobi, Kenya. Receipt of contributions will be acknowledged.

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BULLETIN

70th ANNIVERSARY YEAR

A publication of the East Africa Natural History Society, Box 44486, Nairobi, Kenya. Price 4 shillings

CONTENTS

70 Years. A History 100
Congratulatory Letters to the Society 106
Some Mammal Records From Tsavo East National Park, Kenya. 108
Leopard in the Mara 110
Golden Cat in the Aberdare National Park 111
Wild Dogs on the Magadi Road 112
Observation of a Secretary Bird 112
Peter's Finfoot Nest. 113
Nesting of Marabou Storks in the Makindu-Kiboko-Kibwezi Area 114
Interesting Observations on the Cut-throat and Pale Chanting Goshawk 116
Orchids on Njoro River, Kenya 117
Society Lecture Notes 119
Book Review 120
For Sale 121
Wanted Known 121
Society Notes 121
New Members 123
Society Functions 124

The Progressive Years

By December 1940 the Society had weathered the first year free from its obligations to the Coryndon Museum and it had proved a difficult one. At best, it had held its own and managed to carry out its function. Membership had been maintained but a greater effort was needed to increase support.

The Executive Committee met eight times during the year despite the extra duties of a military and civil nature imposed on the members. In those troublesome times the distribution of Journals was seriously interfered with, and it was remarkable that they were received at all by the world-wide exchange members. The work of the honorary librarian, the secretary and the Journal committee proved far from easy.

During the year a section of the Society was formed to study the prehistory of Kenya. Monthly field excursions were made and, after a survey of possibilities, it was decided to devote time to the excavation of a site on the slopes of Lukenya Hill, about 50 km from Nairobi on the Mombasa Road. These outings were under the leadership of Dr Louis Leakey and his wife Mary; very useful work was done, some 5,000 specimens of the Wilton B. Culture of the East African stone age were unearthed. All these were classified and catalogued and formed a valuable addition to the archaeological collections of the museum. Before these excavations the Wilton B. Culture had only been known from sites in northern Tanzania. The Leakey's and their band of helpers were congratulated on their results and Capt. Irvine was thanked for allowing the Society to use his land for this purpose.

The flora and fauna of Stony Athi were also studied during 1941 and comprehensive zoological and botanical collections were deposited in the museum. A great deal of help was given by the Museum's botanist, Mr P.R.O. Bally.

Although the museum was now administered by a board of trustees, it remained the headquarters of the Society and members felt that they should help to make it the best possible.

At the close of 1940 the Society had two main objectives, firstly greatly increased membership to enable it to carry on, and secondly to provide collectors and collections for the benifit of the museum.

During the Annual General Meeting held in February 1941 the Chairman of the Society, Sir Charles Belcher, formally announced the resignation of Dr V.G.L. van Someren as both the Society's representative on the Museum's Board of Trustees and as Director of the Museum. It was with the greatest regret that the resignation of this most able man was accepted. Important parts of Dr van Someren's collections were to remain

in the museum. Some had been acquired by the Trustees and Dr van Someren had generously agreed to leave his collection of mammals permanently deposited there. The Society expressed its gratitude and appreciation for his services over so many years. He had been the editor of the Journal for 15 years, covering 44 numbers.

For the first time in its history the Society, with the co-operation of the Museum Board of Trustees, held a conversazione in the museum on the evening of 15th October 1941. The Society and the Museum Trustees were hosts and a number of invited guests, including His Excellency the Governor, attended. The main hall of the museum had been cleared and special exhibits were staged. Botany exhibits were arranged by Mr Bally and his wife and a collection of fossils from Olduval Gorge proved most interesting. Many aspects of natural history were on display; the governments Veterinary, Geological, Mining and Agriculture Departments also took part. On 11th October the conversazione was opened to parties of school children and the public with conducted tours of the exhibits arranged. Both evenings were well attended and considered a great success; the Committee decided that a conversazione should be held each year.

The Executive Committee met in October 1941 to discuss how the Society could assist in educating children in the many aspects of natural history. At the suggestion of the Director of Education it was decided that a series of broadcasted talks be given. Three were presented during 1941 and nine followed in 1942. It was agreed that guides were essential when parties of children visited the museum.

In 1942 a series of lectures on birds was given by Dr Leakey to Society members and in the same year he was made an Honorary Life Member.

A brochure on Scavenging Birds by Miles E.W. North was produced, followed by one of Stapelieae by Mr Bally, and another dealing with Epiphytic Orchids of East Africa by W.M. Moreau and R.E. Moreau. These sold very well, the sales figures constituted a record for the Society.

Mr Gedye was away on active service for the greater part of 1942 and much of his work in the library was carried out by Mrs H. Copley. During the year the Society learned with regret of the death of Major H. Ward who had served on committee for a number of years and donated valuable books to the library. The committee was also saddened by the death of Mr Blaney Percival, a founder member and a fine field naturalist.

Due to petrol shortages the monthly field meetings were not well attended and Dr Leakey suggested that instead monthly informal discussions be held at the museum. The second conversazione was held on 23rd, 24th and 25th October 1942.

Difficulties in publications being received overseas were experienced and it was decided that the Journal would only be sent to members in England and America, the rest being stored for overseas members until the war was over and postal services restored to normal.

In December 1942 Major C.J.P. Ionides joined the Society as a life member. He was well known for his activities as a snake collector and for his publications on herpetology.

The year was marked by a striking increase in membership, 66 new full members joined. The Society was able to meet its liabilities, thanks to the Museum Trustees who made a grant towards the increasing cost of publishing the Journal, and from revenue derived from subscriptions and sales of publications.

Mrs Copley, the Acting Hon. Librarian did valuable work compiling a catalogue of the books in the library, dividing them into those belonging to the Society, the Board of Trustees and the Kenya Government. A list of books on loan was also prepared.

In 1943 it was proposed that the name of the Society should be changed from 'East Africa and Uganda Natural History Society' to 'East Africa Natural History Society'. This was approved unanimously. The year was a dull one with little activity, but despite the many other preoccupations of members of the committee, it never had any difficulty in obtaining a quorum at its meetings.

1944 was a successful year with an increased membership. The printing of the Journal was still the greatest problem facing the Society, and this remained so for several years. Nevertheless, some interesting articles were produced, for example, 'Volcanological Observations in East Africa - Kilimanjiro' by J.J. Richards, with illustrations, 'Notes on the Sea Birds of Brava' by Myles E.W. North and 'Ducks and Geese of the Ethiopian Region' by Hugh Woodman, all contained in Journal no 81/82.

The patrons of the Society at this time were :
His Excellency Sir Philip E. Mitchell K.C.M.G., M.C.
Air Vice-Marshall Sir Robert Brooke-Popham G.C.V.O., K.C.B., C.M.G., D.S.O., A.F.C.
Major General Sir Edward Northey G.C.M.G., C.B.

All of them showed great interest in the work and aims of the Society.

At the 35th Annual General Meeting several changes in the committee were made, some office bearers being away from Nairobi or out of the Colony. Other members of the Society filled their places and enabled the good work to be carried on. Twelve committee meetings were held during the year and 87 new members were elected. It was pleasing to record that many members of

H.M. Forces had joined the Society during their stay in East Africa.

Noted with regret was the passing of two of its oldest members, Archdeacon Owen and Capt. J.T. Oulton, both of whom had always taken a keen interest in the Society's affairs and had done much work to further the knowledge of natural history.

The 1945 conversazione was again very successful and attracted over 2,000 members of the public during the two and a half days over which it was held.

Dr Leakey gave a most interesting lecture on the work done at Olorgesailie. This included an account of the lake deposits, the people who had inhabited the area and the animals which had lived at the various occupational levels. He stressed the importance of the site and the finds already made, and expressed great hopes that a small museum would be set up, as well as weather-protected excavations prepared to interest the public. All this has been done and the site is now run by the National Museums of Kenya. It is a popular place, visited by many Society members. Apart from its archaeological interest it has a good dry country bird population and several species of mammals. Botanists and entomologists also find much to interest them.

The Journal No 83/84 issued in 1945 contained works on a variety of subjects such as 'A guide to the Snakes of Nairobi District' by Arthur Loveridge, 'East African Succulents' Part 6 by P.R.O. Bally and 'The Dancing Display and Courtship of Jackson's Whydah' by V.D. van Someren. The occasional notes in this Journal were also interesting and informative.

The Society was actively concerned with the proposal to set up national parks and game reserves in East Africa and two members of the committee served on the Board of Trustees for the project during the year.

The Society was also active in urging that a War Memorial in Kenya should take the form of an expansion of the museum services. It believed that this would benifit, without fear or favour, every race, sex and age in the community. The admission of 89,000 people to the museum during 1945 was an indication of the popularity and educational value of such an institution. The War Memorial committee decided that such an expansion would be considered if any funds were available after a proposed bursary scheme had been fulfilled. Sir Charles Belcher regretfully resigned from the Society's committee at the end of 1945 as he was leaving Kenya for South Africa.

Dr V.D. van Someren, the Hon. Secretary of the Society proposed in 1946 that a bird ringing scheme should be instituted. This met with the instant approval of the committee. The scheme is still a valued and valuable part of the Society's activities and is now in the able hands of the ringing organizer,

Mr Graeme C. Backhurst.

Mr Gedye, now back from his army duties and again an active member of the Executive Committee, indicated that the Zoological Society of London was willing to exchange Journals with the Society. It was obvious that the Journal ranked as a leading scientific publication and was so regarded by many institutions around the world. Today approximately 200 scientific bodies receive the Journal in exchange for their publications and many overseas universities are members of the Society, a fact which may not be generally realised by members.

During 1946 the museum led an expedition to the Mau Forest and an interesting account of this was published in Journal No 87/88 in the article 'Botanist's Diary' Part One by P.R.O. Bally. Copies of this are still available.

By the end of 1946 Mr John S. Karmali B. Pharm, F.P.S., D.B.A., had joined the Society. He later became a very active member of the committee and has been a most able chairman for the past ten years. Also joined the Society in that year were Mrs Elspeth Huxley, the well known writer, Mr Philip Glover, a botanist who did research work in Tsavo and Mr John Williams, the museum's ornithologist for several years.

The first year of peace saw welcome and continual progress in the Society. Membership was maintained and more activities arranged to stimulate interest. Monthly rambles were popular but somewhat restricted due to the bad conditions of many of the roads outside Nairobi.

Apart from the Journal the Society now proposed to publish a form of bulletin to contain short nature notes and records received from members. This was the begining of the Bulletin now received bi-monthly by members.

Dr V.D. van Someren resigned from his post as honorary secretary of the Society in September 1947 on being transfered to another district. He had given a great deal of help and this was much apprecciated by the committee and members. Mr S.J.K. Collins took over the duties of secretary.

The 1948 conversazione was attended by 2,253 people and was its usual success. The executive committee met regularly throughout the year. Due to paper and labour shortages in England, where the Journal was printed, there had been considerable delay in its publication. To fill the gap the Society published a quarterly booklet entitled 'Nature in East Africa'. This became a popular means of keeping members updated with the Society's activities. There are still a few sets of this publication for sale in the Nairobi office.

The library had aquired the entire Hobley library, which, due to lack of space, had to be stored in boxes. A new extension was being built and when completed these books were

to be housed satisfactorily.

Dr Leslie H. Brown joined the Society in 1949. He was an agricultural officer and first class ornithologist, well known for his excellent books on birds of prey and, of course, for his long study of flamingoes and authoritative publications on them.

The Society was pleased to publish a most valuable work, welcome by all those interested in East African fauna. This was 'A Checklist of the Land Mammals of Tanganyika Territory and Zanzibar Protectorate by C.H. Swynnerton F.Z.S. and R.W. Hayman F.Z.S., published as Journal No 90, 1950. This was carefully compiled and had long been needed, it was hoped that comparable lists of Kenya and Uganda would be forthcoming. A few copies are still available.

Miss Priscilla M. Allen joined the committee early in 1950 and took over the duties of secretary as Mr Collins was leaving. The Society's library had increased enormously and held many valubale books. With a view to safeguarding these the committee decided to start a 'reserve list'. Members would be able to make use of the books on the list but would not be allowed to remove them from the library. Such a system is still in practice. Since the library had three sets of Sir Frederick Jackson's books 'The Birds of Kenya Colony and Uganda Protectorate' one of them was offered for sale at £30. How many members would like to obtain these valuable books, written by the Society's founder for such a sum today !

Due to the high cost of producing the Journal the Society could no longer afford a paid librarian. Mr Rhodes who had been doing this work, left the post in August 1950 and honorary librarians took over. Many subscriptions were received later in the year, but great care was needed to meet commitments for the year. A successful aspect was a series of lectures given by Mr J. Williams on the identification of the birds of East Africa. Due to lack of space in the Museum, where extensions were still being carried out, no conversazione was held in 1950. To compensate for this a 'sundowner' was held at the New Stanley Hotel in January 1951. This was followed by a film presented by Col. Cowie, Director of National Parks and a very active member of committee.

The president of the Society, Mr A.M. Champion, resigned in early 1950 due to ill health. His resignation was reluctantly accepted and he was elected an honorary life member in appreciation of all the work he had done. He died in May 1950 and in his will he left the Society the gold medal awarded to him by the Royal Geographical Society as well as his Africana books.

(Note : January/February Bulletin, Page 7 para 4 should read Mr Oldfield Thomas. Ed.)

CONGRATULATORY LETTERS TO THE SOCIETY

Dear Members,

On behalf of the Transvaal Museum, and especially the Bird Department considering your Jubilee publications, we wish you every success with the next seven decades of your existence.

Yours sincerely, Dr A.C. Kemp, Bird Department.

Dear Mr Karmali,

The Director and staff of the State Museum would like to offer your Society our congratulations on 70 years of sterling work, and to convey to its members our very best wishes for the years to come. Seventy years might be a short period in the written history of some countries, to us it is associated with the initial phases of our countrywide organised society. Your Society's foundation and active existance is a sign of its fully filling an open niche and gives credit to its members.

In these times when the publication of scientific information, needed by scientists all over the world, becomes increasingly expensive, the contribution of Societies such as yours is invaluable. May the East Africa Natural History Society grow and flourish.

Yours sincerely, C.G. Coetzee, Director, State Museum, Windhoek, South West Africa, Namibia.

Monsieur le Président,

La direction du Muséum d'Histoire naturelle de Genève est heureuse d'adresser à 'The East Africa Natural History Society/ Nairobi', ses messages chaleureux de félicitations à l'occasion de son anniversaire.

Elle tient à lui présenter ses vifs compliments pour ses 70 ans d'activité créatrice, et forme ses meilleurs voeux pour son avenir en lui souhaitant plein succès pour la suite de ses travaux.

Veuillez croire, Monsieur le Président, à l'assurance de nos sentiments de haute considération.

Villy Aellen, Director.

Dear Mr Karmali,

On behalf of the Council and staff of the National Museum, Bloemfontein, I wish to extend our hartiest congratulations on the 70-year celebration of the founding of your illustrious Society.

The name of your Society ranks amongst those of a handful of the best-known National History Societies on our Continent, and the excellent publications of your Society have greatly

contributed to create more interest in the fauna and flora of our part of the world.

We wish you luck for at least the next 70 years !

Yours sincerely, J.J. Oberholzer, Director.

Dear Sir,

The staff and managing director of the Zoologisches Institut und Zoologisches Museum, Universitat Hamburg, are taking pleasure to congratulate the East Africa Natural History Society on the occasion of the anniversary of this year. In 1979 your society is 70 years old, and we sincerely hope will continue to flourish for the benifit of scientific work on East African animals and plants.

Prof. Dr Harald Schliemann.

Dear Mr Karmali,

Our warmest congratulations to your Society on its 70th birthday. Down here in the south we are very impressed by the work you have done and the length of time you have been doing it.

As you know, both my husband, Prof. J.L.B. Smith and I collected fishes along the coasts of Kenya and what is now Tanzania. As I once said in a meeting, "animals know no political boundaries". I can add to that - "thank goodness !".

I hope that in the future we will be able to co-operate as we did in the past and that the scientists of this continent will help towards making it what it should be - one of the finest continents in the world.

With renewed congratulations and good wishes for the next 70 years from everyone in the JLB Smith Institute of Ichthyology and especially myself - I have such pleasant memories of your lovely country.

Yours sincerely, Mrs M.M. Smith, Director.

Dear Mr Karmali,

The Smithsonian Institution extends warm greetings and best wishes to the officers and members of the East Africa Natural History Society on the occasion of its 70th anniversary.

The East Africa Natural History Society has been a significant force in efforts to educate the public to the beauty and importance of the flora and fauna of East Africa and in promoting nature conservation in the region. The work of this Society has been a successful model for the development of other organizations on the entire African continent.

On this the Society's 70th anniversary, the Smithsonian makes due recognition of your efforts and extends warm wishes. Sincerely yours, S. Dillon Rapley, Secretary.

SOME MAMMAL RECORDS FROM TSAVO EAST NATIONAL PARK, KENYA

Between November 1974 and January 1977 I was living in Tsavo East National Park, carrying out a study of the land-bird populations. During the course of extensive field work for this, both inside and just outside the Park, I often saw other animals as well, especially mammals. Some of these are very well known and will be seen by most people travelling through the Park, but as my work was largely done on foot, almost always within a quarter of a mile from a road, I also saw several species which are not commonly seen by visitors. These are the subject of the notes which follow. My observations were always incidental to other things and I did not always take notes when such species were seen; hence some of what follows is imprecise. My work was concentrated in the western two-thirds of the area of the Park south of the Galana River and just outside the south-west boundary near Voi, but visits were made to the rest of this southern area and to a few parts of the northern area at intervals. All nomenclature follows Dorst and Dandelot (1970).

I consider the following species as fairly common in suitable habitats and likely to be well known and seen by many visitors. They are therefore not included in any detail.

Black-faced Vervet Cercopithecus aethiops, Baboon probably Olive Papio sp. probably P. anubis, Elephant Loxodonta africana, Rhino Diceros bicornis, Common Zebra Equus burchelli, Warthog Phacocerus aethiopicus, Giraffe Giraffa camelopardalis, Kongoni Alcephalus buselaphus, Common Waterbuck Kobus ellipsiprymnus, Impala Aepyceros melampus, Grant's (Peter's) Gazelle Gazella granti petersi, Gerenuk Litocrania walleri, Fringe-eared Oryx Oryx beisa, Lesser Kudu Tragelaphus imberbis, Eland Taurotragus oryx and African Buffalo Syncerus caffer.

Less Common Species

a small Elephant Shrew probably Rufous-speckled Elephantulus rufescens. Seen in woodland just outside the Park in September 1975, April and December 1976.

Yellow-winged Bat Lavia frons. 1 seen roosting in a Suaeda thicket near Sobo in early 1975.

Blue (Sykes's) Monkey Cercopithecus mitis. I saw or heard a party along the Voi River in February, May, June and October 1976.

Hunting Dog Lycaon pictus. I saw small groups, once on Galana Ranch and twice in the northern area of the Park. Also a pack of 34 in the dry bed of the Tiva River in November 1975.

Black-backed Jackal Canis mesomelas. Many records and in most areas. 1 with 5 cubs near Park HQ in October 1975.

Bat-eared Fox Otocyon megalotis. Seen fairly often in groups up to 5, mostly south of the Voi River.
Ratel (Honey Badger) Mellivora capensis. 12 - 15 records, from all parts of the Park.
African Civet Viverra civetta. Seen 3 to 4 times near Park HQ at night; 1 near Mukwaju in October 1975 and 1 near Ntarakana in July 1976.
Genet Genetta sp. or spp. Commonly seen around Park HQ at night. Twice found roosting in thick thorny bushes by day.
Dwarf Mongoose Helogale undulata. Common everywhere where there are termite mounds for them to live in.
Slender (Black-tipped) Mongoose Herpestes sanguineus. Several records of singles and once 2 together usually north of the Voi River and in thick grass.
White-tailed Mongoose Ichneumia albicauda. Several records around Park HQ at night. One disturbed from a termite mound near Irima in April 1976.
Banded Mongoose Mungos mungo. 4 - 5 records of small packs all near the western side of the Park.
Aardwolf Proteles cristatus. Nearly 20 records usually in open country and especially on Ndara Plains.
Spotted Hyaena Crocuta crocuta. Often heard at night although not seen very often. I usually saw them singly and not more than 4 together.
Striped Hyaena Hyaena hyaena. 5 records of singles widely scattered.
Cheetah Acinonyx jubatus. 3 records (2 of 2 individuals and 1 on its own) near the western edge of the Park in February and May 1975 and July 1976.
African Wild Cat Felis libyca. 1 near Irima Hill March 1975, 1 between Aruba and Sala Gate in March 1976, and 1 near Mukwaju in August 1976. All appeared to have Wild Cat characters (such as the banded tail) but I cannot rule out the possibility of some domestic blood in them.
Serval Felis serval. A 'typical' form between Aruba and Lugard's Falls in March 1975, and another on Ndara Plains in March 1976. What was probably a 'black' serval was seen briefly near Irima in mid 1975.
Lion Panthera leo. Heard almost every night around Park HQ and seen at intervals there and elsewhere. The largest pride I saw was 14 near the Galana River about 5 km east of Lugard's Falls in July 1976.
Leopard Panthera pardus. 2 together seen at night between Voi and the Park Gate in early 1975 and 1 in Punda Milia about 10 a.m. in May 1975. Occasionally heard around Park HQ at night.
Rock Hyrax Heterohyrax brucei. Common on all rocky hills around Voi.
Grevy's Zebra Equus grevyi. This species was introduced in 1962. I saw one twice along the Voi River Circuit and once at Kanderi in June and October 1975.

Hippopotamus Hippopotamus amphibius. Seen regularly in the Galana River. I also saw 1 in Aruba Dam in August, September and December 1976.
Hunter's Antelope Damaliscus hunteri. This species was introduced in 1962. I saw 8 adults and 3 immatures south of Makwaju in March 1975 and 1 adult about a mile south of Aruba in December 1976.
Bush Duiker Sylvicapra grimmia. Several records from areas with thick bushes.
Steinbok Raphicerus campestris (some were possibly Oribi Ourebia ourebi). Many records mainly from open country especially the Ndara Plains.
Kirk's Dik-Dik Rhynchotragus kirki. The common small antelope in thick bush areas.
Bohor Reedbuck Redunca redunca. 1 seen along the Voi River in December 1975, 1 there in December 1976 and 1 near Voi Gate in December 1976.
Bush Buck Tragelaphus scriptus. Seen rarely along the Voi River Circuit.
African Hare Lepus capensis. Common wherever there are bushes.
Porcupine Hystrix galeata. 1 ran through the Education Centre at Voi in April 1976.

REFERENCE:
Dorst J. & Dandelot, P. 1970. A Field Guide to the Larger Mammals of Africa. London, Collins.

Peter Lack, E.G.I./A.E.R.G., Dept. Zoology,
South Parks Road, Oxford, U.K.

LEOPARD IN THE MARA

During June 1979 we were on an early morning game run in the Masai Mara Game Reserve, Kenya. We left the Lodge at 6.30 a.m. on a very clear and sunny morning and headed towards the Telek River. Going off the main track on the plains we spotted what looked like a lone Lioness, Panthera leo, from a distance. She was sitting upright in the midst of a large clear area of rather tall grass. As the grass was a golden colour we were not at all sure if it was a Lioness. Proceeding slowly through the grass we very soon discovered it was a Leopard, Panthera pardus. We presumed it to be a female as it was smallish in size. As she was totally unconcerned about our presence we stayed and watched her for some time. Over towards our right the land dipped slightly and then rose into a fairly steep incline, giving a fairly close horizon. On the top of this incline was a female Impala, Aepyceros melampus, with one young while half way up was a solitary Topi, Damaliscus korrigum.

The adult Leopard then stood up and proceeded to stalk

the Topi. At this point we discovered a young Leopard cub now sitting upright just behind where the mother had been, watching her very intently. The Leopard increased it's pace and rushed at the Topi. Immediately before she reached it she suddenly switched course and veered away at great speed towards the Impala, who was still standing by it's young. The Leopard easily caught the young Impala and carried it back to her cub, who by now was slowly walking towards her. She carried the 'kill' between her front legs and on reaching the cub dropped the young Impala in front of her. To our amazement the young Impala stood up and started to run off, apparently quite unharmed.

Then, what appeared to be a lesson for the cub, took place. As the cub was chasing and playing with the Impala the adult Leopard was constantly walking round and kept close to both of them, periodically pawing the Impala to keep it near her cub. This form of play and attack went on for over half an hour with the cub continually chasing and pawing its prey and the mother circling them both, keeping full control of the situation. They were totally absorbed in their activities and quite unconcerned at our presence; we kept at a reasonable distance so as not to disturb them. It really appeared as if the cub was having a lesson on stalking and catching prey. Unfortunately, they slowly moved out of sight and it was time for us to leave. We presumed, however, that eventually the young Impala would be killed by the cub or it's mother.

We thought it rather unusual to find a Leopard in such open country and to witness what seemed to be a pre-meditated 'mock' attack on the Topi in order to enable an easy catch of the Impala. The attentiveness of the female Leopard when her cub was making 'mock' attacks on the young Impala was fascinating to watch.

E.M. Nickalls, P.O. Box 18288, NAIROBI

GOLDEN CAT IN THE ABERDARE NATIONAL PARK

On 14th July 1979 at about 1500 hrs, while driving to The Ark in the Aberdare National Park, Kenya, I was lucky enough to see three Golden Cats, Felis aurata.

These animals, an adult and two young, crossed the road in front of the vehicle, running very fast. My first thought was that they were Caracals, Felis caracal, but I quickly realised they were not - firstly the creatures I saw had no ear tufts and short legs, and secondly the altitude and habitat were both wrong for Caracal. They were seen at an altitude of 2,133 m (7,000 ft) in high-level forest with open, grassy

glades. At the time of the sighting I was accompanied by Miss G.D.and Mr J.L.M. Bradley of Ashford, Kent, U.K.

It is interesting to note that I have driven through this part of the Aberdares almost every day for seven years and have never seen a Golden Cat. I read in Dorst and Dandelot, Field Guide to the Larger Mammals of Africa that 'almost nothing is known of the habits of this rare and crepuscular cat, very elusive even when present in numbers in some parts of its range'.

On my next visit to Nairobi I checked the skins of this creature with Mr I.R. Aggundry, Mammalogist, National Museum and my identification was confirmed. The Aberdares Golden Cats were of the 'normal' reddish-brown and not the darker grey or blackish forms. As far as I can ascertain, this is the first published record of Golden Cat in the Aberdare National Park.

Ian W. Hardy, P.O. Box 449, NYERI, Kenya

WILD DOGS ON THE MAGADI ROAD

On 12th August 1979, some 14 km from Kiserian on the Magadi Road, between Ol Orian and Kampi ya Bibi, two fine Wild Dogs, Lycaon pictus, were seen on the road at around 08.30 hrs by Patsy and Ted Norris and the writer. I doubt if these dogs have been seen in this general area for a long time and it is good to know that some still survive. What they prey on if difficult to imagine as we saw little game and only a few Grant's Gazelles, Gazella granti on the Oltepesi Plains.

G.R. Cunningham-van Someren, P.O. Box 40658, NAIROBI

OBSERVATION OF A SECRETARY BIRD

On a recent early morning trip into the Nairobi National Park we spotted a Secretary Bird, Sagittarius serpentarius, fairly close to the road. In it's bill it was carrying a dead grass snake. We stopped to observe this and the bird then came on to the tarmac just in front of the car. We then moved slowly towards it and it spread it's wings and ran straight ahead of us, still keeping to the road. This went on for some time with both us and the bird moving slowly down the road. Eventually the bird stopped and dropped the snake in the middle of the tarmac. He immediately disgorged a mole rat which was more or less whole and then proceeded to tear this apart with his bill whilst holding it on the ground with his claws. He eat the whole of the mole rat and then gobbled up the grass snake and went on his way into the grass.

We wondered if this was the Secretary Bird's usual way of feeding or if perhaps the disgorged rat and snake were intended to feed some young.

E.M. Nickalls, P.O. Box 18288, NAIROBI

PETER'S FINFOOT NEST

On Sunday, 6th May 1979 we came across a Peter's Finfoot, Podica senegalensis, sitting on a nest poised in the branches of a fallen but rooted and still living acacia tree some 4.5 m from the bank and 1 m above the swollen waters of the Athi River on Juja Farm, Ruiru, Kenya.

The nest, composed of dried grass arranged in layers rather than woven, was oval in shape, approximately 38 cm x 30 cm and 8 cm deep. It had some Cyperus sp ('ithanji') on top and the odd fresh leaf. There were two indentations in which reposed 2 light brown eggs, marbled in shades of purple and approximately 6 cm long.

We only ever saw one adult bird in the vicinity, and presumed that Mrs Finfoot did the sitting. During the ensuing 12 days we visited the site on 4 occasions, and although Mrs Finfoot left the nest on each occasion and made her way some 18 m across the stream to an island, she did not appear to be scared, rather more to welcome the break for a swim, bath and tidy up, and as soon as we moved away even 18 m she came back, hopped onto a branch in the tree, dried herself for a few minutes and settled down on the nest very contentedly, well aware that we were still there. On one occasion after she had resettled a photographer crept slowly up to within a metre or so but she did not move again.

On our third visit on 13th May the river had risen several metres due to heavy rain, and we feared for the nest. However, the tree must have risen with the flood, and although water was lapping the bottom of the nest, both eggs were in situ and Mrs Finfoot unperturbed.

On the last occasion we saw the bird on the nest, Thursday 17th May, the evening sunlight highlighted the feathers and the colouring was exquisite. On that occasion instead of going across the river the bird let itself be taken by the current some 27 m downstream, until it rested near some grass stalks. We both wondered if by chance, we had seen the other bird of the pair. Unfortunately we were unable to stay and witness its return to the nest.

On 15th May Fergus McCartney took some photographs of

the nest, of the eggs and of the bird sitting. We must hope that they come out.

By Saturday 19th May word had got around and keen ornithologists and photographers were gathering to pay their respects, only to find that Cruel Nature had taken a hand. No Mrs Finfoot, no eggs, no shell, but a large monitor lizard lying along the branch of the tree. A Finfoot was seen a short time afterwards about 0.5 km upstream, but no sign of young, and it could have been another bird anyway.

We know of five other birds on the rivers bounding the farm, but have seldom seen two together, nor indeed in close proximity, nor have the birds been observed feeding. We did notice that the feathers of the dry bird on the nest were beautifully marked and the colouring brilliant, but as soon as the bird was wet the colours seemed to fade.

The chances of finding another nest in such an ideal spot are slim, but we still keep on looking.

John and Jane Carver, Juja Farm, Private Bag, RUIRU, Kenya

NESTING OF MARABOU STORKS IN THE MAKINDU - KIBOKO - KIBWEZI AREA

Kahl (1968) reports that in 1965 Marabou Storks Leptoptilos crumeniferus were nesting at a site near Makindu, Kenya, and this was still in use in 1974 (W.L.N. Tickell pers. comm.). Tickell estimated that there were between 45 and 55 nests, the age of the young suggesting that egg-laying had been in July, the same month as reported by Kahl (loc. cit.). In September 1976 I visited the site, which was 4 km south-west of Makindu town (Grid Ref. CH 6745), but found that it had been abandoned - local informants said that it had not been used for several months. In 1977 and 1978, Marabous nested at Kiboko and Kibwezi (Grid Refs. CH 5755 and 8334 respectively) (D.J. Pearson, pers. comm., Madge and Richards 1977, and pers. obs.). The Kiboko site, in the grounds behind Hunter's Lodge hotel had, according to the hotel gardener, also been used in 1976. So it seems that the nesting at the new site came in the same year that the Makindu site was abandoned, and thus it is likely that the same birds were involved. The reason for the change of site is not known but a similar move occurred in the Rwenzori National Park in Uganda in 1970 - 1 (Pomeroy 1977).

The minimum number of nests in use in 1977 and 1978 is shown in Table 1. However, the nests at Kibwezi extend over a distance of nearly a kilometre, and there is very thick

undergrowth beneath the trees in both years, making it difficult to be certain that all nesting trees had been seen. Thus the decrease in numbers, from 45 - 55 in 1974 to combined totals of 33 in 1977 and 42 in 1978, may be more apparent than real.

TABLE 1

Minimum numbers of nests and trees in use (Archer 1978 and pers. obs.).

	KIBWEZI		KIBOKO	
	No. nests	No. trees	No. nests	No. trees
1977	22	6	11	1
1978	25	8	17	2

Egg-laying dates for Marabous can be inferred from the appearance of the young (Pomeroy 1978a). Except in the driest areas of eastern Africa, egg-laying occurs in the dry season and continues into the succeeding wet season (Pomeroy 1978b). This was the case with the Makindu - Kiboko - Kibwezi colonies (table 2): the average month of egg-laying seems to have been July, but was delayed in 1977 following a very wet period from March to May, and was earlier in 1978 after a dry April and May. However, although nest-building had begun at Kiboko on May 23rd 1978, and one nest had young on August 9th, this first nesting seems to have been unsuccessful, at least for the majority of pairs. On December 9th, the average age of the young in the nest was about 75 days, suggesting an egg-laying date in early September (the incubation period being about 30 days).

TABLE 2

Rainfall data for Bushwhackers (20 km north-east of Kibwezi) and mean egg-laying at the Makindu - Kiboko - Kibwezi colonies. Rainfall is in millimetres.

	1965	1974	1975	1976	1977	1978
January	43	7	3	0	19	29
February	0	39	10	0	11	54
March	9	98	0	21	81	114
April	33	242	109	40	197	34
May	34	8	19	18	98	8
June	0	3	0	0	4	0*
July	0*	4*	1	0	0	2
August	3	7	0	0	10*	0
September	0	0	18	34	4	0+
October	73	20	3	2	24	17
November	123	117	124	109	187	148
December	52	15	13	123	111	158

* Estimated month of mean egg-laying data (not known in 1975 or 1976, which are included to show rainfall patterns).
\+ Probable re-laying at Kiboko.

Specific data on breeding success were not recorded, but an unusual observation was of a nest at Kiboko on January 3rd 1978, containing three young estimated to be about 120 days old. It is exceptional for three young to survive to this age, which is close to fledging.

The Kiboko colony, like several of the ones in Uganda (Pomeroy 1977), had weavers in the same tree as the Marabous, but below them. In this case the weavers were Layard's, Ploceus nigriceps. And there was a colony of Black-headed Herons Ardea melanocephala in an adjacent tree.

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D.E. Pomeroy, P.O. Box 43844, NAIROBI

INTERESTING OBSERVATIONS ON THE CUT-THROAT AND PALE-CHANTING GOSHAWK

On 18th August 1979, Prof. D. Pomeroy and I were on the way to Kalema (Magadi North, Kenya) to join the Brathay Expedition Group. We stopped on the Empaash Plains, Magadi North, to do a one hour bird observation. In the process, we spotted a pair of Cut-throats, Amadina fasciata on Acacia tortilis where there were several nests of the Grey-headed Social Weavers, Pseudonigrita arnaudi. The nest owners were absent and the female Cut-throat carefully inspected one of the nests from outside and then entered it. After about one minute, she emerged from the nest. Meanwhile, the male Cut-throat waited outside and seemed less concerned with his mate's activity. Nevertheless, they flew to another Acacia tortilis and the female repeated the exercise.

We were both puzzled by this behaviour as we did not

suspect Cut-throats to be nest parasites. After the Magadi trip, I mentioned this observation to Mr Cunningham-van Someren, Ornithologist at the National Museum, Nairobi, who confirmed the nest parasitic behaviour of Cut-throats on various Ploceids. Cut-throats utilise vacated nests of Chestnut Sparrows and some Ploceus species. This parasitic behaviour is reported in the Bulletin of the British Ornithologists' Club, Vol. 91, 1971.

After the above incident, we proceeded on to Kalema (Uaso Nyiro River, Magadi North) and stopped again for another hours' bird observation. We spotted a Pale Chanting Goshawk, Melierax polipterus, carrying a snake which it had picked from the long grass. The snake was still alive. It was long, thin and straw coloured with stripes, probably a grass snake. The Goshawk landed on an Acacia tortilis and just before it had started on its prey, a Tawny Eagle, Aquila rapax, arrived and tried to get the snake. The Goshawk protested vigorously and emitted a loud harsh call. It then flew into the thickest part of the tree. The Tawny Eagle tried to follow in pursuit but its size would not let it get into the thicket. A second Tawny Eagle arrived shortly after and also tried to get the snake from the Goshawk, which flew into another tortilis. Our presence was then noted by the three birds. The Tawny Eagles flew away disconsolate and the Goshawk perched on a comfortable branch where it started tearing the snake into small pieces which could be swallowed. The persistant and intelligent behaviour of the Goshawk enabled it to win the battle.

Miss Cecilia Muringo, P.O. Box 40658, NAIROBI

ORCHIDS ON NJORO RIVER, KENYA

The Njoro River has its source on the Mau Escarpment and on its way to Lake Nakuru where it has its mouth, it passes through Egerton College and Njoro township. From the source up to Njoro, although already modified by man, the natural climax vegetation is described as dry highland forest of Juniperus procera - Olea africana association. Around Egerton College where most observations and identifications were done, the riverine natural vegetation is not extensively modified. It is dominated by Acacia abyssinica - Syzygium cordatum association. These trees grow up to six metres high and influence very much the micro-habitats of this river. This area is actually in a transitional zone between the forest and bushland. It receives a rainfall of about 125 mm a year with long rains from April to June. The coldest month is July, with night temperatures dropping below 10°C, and the hottest month being February, maximum temperatures are above 22°C.

Since the beginning of this year I have tried to take the inventory of orchids on this river, near Egerton College. I also looked at their habitats, forms, habits and their flowering times. My exercise had revealed that the orchids which occur here fall into the usual two groups: the ground and epiphytic orchids.

The ground orchids are fewer in number than the epiphytic ones. They are represented by Habenaria keniensis and Eulophia paivaena. The latter, unlike the former, likes shaded and stony areas along the river bank. H. keniensis flowers very early in the year, in March, and has greenish-white flowers. E. paivaena, which has purplish-yellow flowers, comes into bloom between late April and late June.

The next group of orchids are all found on tree trunks as epiphytes. They have some roots which go into dead bark and others hang down to capture air, moisture and dust. Commonly found on tree trunks, mostly on Acacia abyssinica and frequently on Syzygium cordatum is the grass-like Polystachya spatella. Another orchid in the same genus, though not a common one is P. cultriformis. The former has slender leaves, smaller pseudobulbs, sympodial growth and yellow-green flowers on a panicle. It flowers between April and August. P. cultriformis has shorter triangular pseudobulbs with few leaves which are wider and longer than P. spatella. The flowers are white and on a panicle. It flowers right from April to August. Unlike P. spatella, it is found growing on tree trunks that are in more shaded and humid areas.

Other orchids in this epiphytic group are also found growing in very shaded areas. They are Diaphananthe rutila and Cyrtorchis arcuata. Both have long pendulous stems and hanging aerial roots, flat notched leaves and their inflorescences are spiked. D. rutila has, however, slender and shorter leaves than C. arcuata, and has leaves that are widely spaced on the woody stem while C. arcuata has leaves that are closely arranged on the stem. In the former, flowers are yellowish-green and flowers between April and August. In the latter, the flowers are white, have each a spur and flower right from February up to August. They make the shaded parts of the river look very attractive when they are in flower.

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P.W. Mumiukha, Egerton College, P.O. NJORO, Kenya

SOCIETY LECTURE NOTES

Mr S. Stephenson on 'Wildlife Conservation in Ethiopia'.

Mr Stephenson's lecture of 9th July on 'Wildlife Conservation in Ethiopia' was of particular interest as comparatively little has been written about Ethiopian wildlife and apart from a number of specifically ornithological tours the country is seldom visited by tourists with wildlife interests.

Because of an extremely varied topography ranging from an extensive highland zone, fissured by awesome canyons, much of which is over 10,000' to severe desert which in some places is below sea level, Ethiopia has an extremely diverse fauna and flora, including a number of endemic species and subspecies of birds and mammals (e.g. the Blue-winged Goose, Cyanochen cyanopterus, the Semiem Fox Canis (Simenia) simensis, and the Ethiopian race walie of the Ibex Capra ibex).

Although various areas have been designated as Parks or Reserves for many years Ethiopians are not conservation-conscious: wildlife has suffered severely both from over-hunting by the erstwhile feudal landlords and from habitat destruction by subsistence cultivators in the highlands (where attempts to grow crops on nearly vertical slopes are resulting in massive soil erosion with bed-rock already exposed in many places) and from nomadic pastoralists in the savannas. Awash National Park has been 'taken over' by pastoralists, partly because modern farming schemes have blocked access to traditional grazing grounds and watering places.

Wildlife Conservation is now officially recognised as an aspect of national resource planning but, unfortunately, is under the general direction of the Ministry of Agriculture. Whether the Semien National Park which is probably vital for saving the endangered Walia Ibex can be saved is doubtful: much of the heath zone has been destroyed and the extensive soil erosion means that eventual recovery is unlikely even if the peasants are moved to better land for farming. On the other hand the future of the Somali Wild Ass, Equus asinus

somalicus seems to be reasonably secure in a region of arid bushed grassland in semi-desert which is mostly impassable to vehicles so that the type of hunting which virtually exterminated the Arabian Oryx, Oryx leucoryx is impossible. One fairly small mountain sanctuary is also currently supporting a healthy population of the Mountain Nyala, Tragelaphus buxtoni.

Mr Stephenson concluded his lecture on a somewhat optimistic note. In the south west of Ethiopia there is a large area of virtually uninhabited country which for various reasons is unattractive to both pastoralists and cultivators. This could form a viable National Park, rich in variety of species and also with some spectacular concentrations of game, especially of White-eared Kob, Kobus leucotis. However, Ethiopia is a poor country and wildlife conservation is well down on the list of priorities: here, possible, is a wonderful opportunity for such bodies as WWF to make a significant contribution to African wildlife conservation by organising international efforts to gather financial aid specifically tied to this project.

Mr Stephenson's most instructive and interesting lecture was illustrated with slides showing the beauty, grandeur and variety of the Ethiopian landscape and also some of the characteristic fauna including the breeding Great White pelicans of Lake Shala.

J.F.R.

BOOK REVIEW

Hutchinson, G.E. 1978. An Introduction to Population Ecology. New Haven & London: Yale Univ. Press. pp xi + 260. Price : £ Stg. 12.60

This is a most unusual ecology text, based on lectures given at Yale University to audiences from a wide range of backgrounds. The chapter titles give an indication of the refreshing approach to what can be a dry subject; for example, mortality is treated under the title 'Interesting ways of thinking about death', and natality under 'Why do they have so many children?'. But this is far from being a kiddies' guide to animal numbers; population ecology is by definition about numbers and it is difficult to avoid fairly complex mathematics. The treatment in this book is definitely advanced; modern (and indeed ancient) mathematical treatments are given full, some might say excessive, prominance, and the author makes considerable demands on his readers' dogged determination to wade through his algebra.

If you don't suffocate in the maths, you may drown in the

footnotes. In the chapter 'What is a niche ?' for example, of the first 7 pages no less than 3½ are taken up by footnotes, some listing references and others giving historical anecdotes that are often fascinating but do break up the flow of the text in a most unsettling manner. It is better to read the chapter first, and then the footnotes, if the thread is to be followed clearly. The layout of the book is thus disconcertingly messy, although the logical plan in itself clear and stimulating, if rather unbalanced, particularly in the treatment of predation which is given short shrift with no mention of the recent very important work in East Africa. The particular value of the book is in its historical treatment of the subject, which is new and valuable; most members will, I think, find the book too specialised, though for those well grounded in the field it is a refreshing treatment by an acknowledged master.

A.W. Diamond

FOR SALE

1) Pentax K2 DMD single lens reflex camera, fully automatix or manual exposure control, connections for motor drive and data bank; together with Pentax SMC 50 mm lens (f. 1.7). Bought in Germany 1½ years ago for approx. K Shs 4,100. For sale after 20th October. Price asked K. Shs 3,300 o.n.o.
2) Underwater still camera Hecomar 111. Cast iron casing contains single lens reflex camera 'Exa 1a'; full focus and aperture control from outside; depth limit 150 m; together with underwater bulb flash. Bought in Germany 3 years ago for approx. K. Shs 4,200. For sale after 1st September. Price asked, K. Shs 2,900 o.n.o.

Please contact: Dr Peter Wirtz, P.O. Box 33, NAKURU, Kenya

WANTED KNOWN

The road to Bushwhackers, Kibwezi, has now been graded !
For bookings, please write to: Mrs Jane Stanton, Box 33, Kibwezi.

SOCIETY NOTES

Journals The following Journal parts are included with this issue of the Bulletin :

Notes on Littoral Algae from Mombasa, Kenya. Jon Knutzen and Erik Jaasund. Number 168, 6th August 1979.

The Avifauna of Sokoke Forest, Kenya. P.L. Britton and D.A. Zimmerman. Number 169, 10th August 1979

Intertidal Seaweeds in Tanzania. This Field Guide, written by Erik Jaasund, is now available to Society members at the special discount price of Shs. 35/- per copy. Please place your orders with the Secretary in the Society's office, at the National Museum, or write to P.O. Box 44486, Nairobi. Although the book is written for Tanzania, most of the seeweeds found there also occur in Kenya. Only 10 copies in stock, so please order soon.

A Guide to Coral Reef Fishes of the Western Indian Ocean by Ken Bock, still available to members at the special discount price of Shs 35/- per copy. Orders from the Secretary at the Society's address.

Wednesday Morning Bird Walks under the very able leadership of Mrs Fleur Ng'weno continue. Please meet in front of the National Museum, Nairobi at 8.45 a.m. sharp. Bird walks normally last about three hours. Beginners welcome.

Talking of birds, do you have your copy of Birds of the African Rain Forests by Stewart Keith. These two records, which have been selling very well, are offered to members for the special price of Shs. 90/- per set of 2 records. Orders through the Secretary please.

Informal Notes designed specially for the Society are still available - price 10/- per set of 12 informal notes with envelopes, air mail weight.

Car Stickers are still is stock, only Shs 2/- each. Use one for advertising and another for your insurance covernote !

Day-trips, camps and lectures - do you have any suggestions. Can you offer to lead a trip to your favourite area ? We are running short of ideas. Please inform the Secretary at the Society's address.

Bird Check Lists are available, Shs 1.50 each, either from the office or the Bird Room, National Museum

Self Service Bandas, Camp Sites etc. Do you have any up-to-date information ? The Secretary would be interested to hear from you; we are constantly being asked about these cheaper places to stay and we like to give accurate information to members. Your help would be much appreciated.

Adjustable Typing Chair, does any member have one for sale or as a gift to the Society ? Secretary suffering constant back ache as the old Journals holding up the leg have been sold! Any offers would be most welcome - thank you !!

NEW MEMBERS

The following new members have been elected to the Society:

Local Full Members

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Overseas Junior Member

Mark Needham, 26 Marsden Lane, Aylestone, Leicester, U.K.

SOCIETY FUNCTIONS

Monday 10th September 1979 at 5.30 p.m. in the Museum Hall, Nairobi, Dr Ken Bock will give an illustrated lecture on 'An Introduction to Coral Reef Fishes'. This is a follow-up of the very popular lecture given by Dr Bock in April on the Coral Reef.

Monday 8th October 1979 at 5.30 p.m. at the Museum Hall, Nairobi. The fabulous film 'Mysteries of the Green Mountain' about the life of the forest in Sarawak. Superb photography of botany and insects, ending up with the enormous caves.

20th/21st October 1979 Week-end field meeting by kind invitation of Mr and Mrs P. Scott of Chemomi Estate, Nandi Hills to study birds and plants in the area. All equipment, food and drinking water should be taken. Members wishing to take part in this field meeting should please fill in the enclosed slip and return it with a stamped and addressed envelope to Mrs A.L. Campbell, P.O. Box 14469, NAIROBI before October 1st. Please make sure the slip reaches her by that date as she will be away during October and not returning before the field meeting.

Monday 12th November 1979 Lecture or film show to be announced later. See next Bulletin for details

24th/25th November 1979 Week end field meeting to the north Naivasha area. Details in the next Bulletin.

Wednesday morning Bird Walks. Please meet every Wednesday in front of the National Museum, Nairobi at 8.45 a.m. sharp. Leader - Mrs Fleur Ng'weno. Beginners very welcome. Bird walks normally last for about three hours.

WE APOLOGISE FOR THE UNTIDY LOOK OF THIS ISSUE OF THE BULLETIN. PAPER OF UNIFORM SIZE UNAVAILABLE !! (Ed.)

THE EAST AFRICA NATURAL HISTORY SOCIETY

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MEMBERSHIP

This offers you free entry to the National Museum, Nairobi; free lectures, films, slide shows or discussions every month in Nairobi; field trips and camps led by experienced guides; free use of the Joint Society-National Museum Library (postal borrowing is also possible); reciprocal arrangements with the Uganda Society's Library in the Uganda Museum, Kampala; family participation: wives and children of members may attend most Society functions; one copy of the *EANHS Bulletin* every two months; a copy of each *Journal* published during your period of membership; the Society controls the ringing of birds in East Africa and welcomes new ringers and runs an active Nest Record Scheme; activities such as plant mapping and game counting are undertaken on a group basis. Membership rates are given at the foot of this page.

JOURNAL

The Society publishes *The Journal of the East Africa Natural History Society and National Museum*. Each issue consists usually of one paper, however, sometimes two or more short papers may be combined to form one number. The aim of this method of presentation is to ensure prompt publication of scientific information; a title page is issued at the end of each year so that the year's papers may be bound together. Contributions, which should be typed in double spacing on one side of the paper, with wide margins, should be sent to the Secretary, Box 44486, Nairobi, Kenya. Authors receive twenty-five reprints of their article free, provided that these are ordered at the time the proofs are returned.

E.A.N.H.S. BULLETIN

This is a duplicated magazine issued six times a year, which exists for the rapid publication of short notes, articles, letters and reviews. Contributions, which may be written in clear handwriting or typed, should be sent to The Editor (*EANHS Bulletin*), Box 44486, Nairobi, Kenya. Line drawings will be considered if they add to the value of the article. Photographs cannot be published.

SCOPUS

The Ornithological Sub Committee publishes this quarterly bird magazine. Cost: EANHS members KShs. 50/- p.a., non-EANHS members KShs. 75/- p.a. All correspondence to D. A. Turner, Box 48019, Nairobi, Kenya.

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Subscriptions are due 1st January. From 1st July you may join for Kshs. 35/- and receive publications from that date. Application forms for membership are obtainable from the Secretary, Box 44486, Nairobi.

NOTES FOR CONTRIBUTORS

Members of the Society (and non-members) are asked to follow these simple instructions when writing articles or letters for submission to the *Bulletin*. The *Bulletin* is presented six times a year in a duplicated format: the paper size is 20.5×23 cm (10×8 inches), line drawings can be reproduced but the area should not be more than 17.5×23 cm. Lettering on figures should preferably be in 'Letraset', neatly done in Indian ink or left blank: if the last method is followed, the lettering should be indicated on an overlaying sheet and should *not* be done on the figure. Figures should be prepared on good quality white writing paper and not on Bristol Board or other thick material. Whenever plants or animals are mentioned the scientific name should also be given but not in parenthesis. Trinomials should not be used unless there is good reason to do so. Author's names of species are not required.

Contributions may be typed (preferably) or written clearly and should be sent to: M. P. Clifton, Box 44486, Nairobi, Kenya. Receipt of contributions will be acknowledged.

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NEWSLETTER

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Editor: P.O. Kabete, Secretary: Box 4486 Nairobi, Kenya.

CONTENTS

Mt Suswa Camp - 38
Horsefly Observations - 40
AFRING - 41
Diani Forest - 42
Preliminary Bird Checklist - Note - - - - - - - - - - - - - - - - - 43
Aggressive behaviour in spawning Trout - - - - - - - - - - - - - - 44
To Coast Members - 44
Melanistic Common Sandpiper - 45
Ringing News - 45
Eye colour of the Black-bellied Glossy Starling - - - - - - - - - - 46
Requests for Information - 46
Letters to the Editor - 47
Appointments - 48
Editors Note - 48
The Journal - Note - 49
Society Functions - 49
Library Notes - 49
The *Journal* - Important Notice - - - - - - - - - - - - - - - - - - 50

MT SUSWA CAMP- 26th/27th SEPTEMBER

"That was one of the nicest Society weekend excursions we've ever had" observed one member as he sank back in his armchair at home after digging one of our members out of the dust on the way to Suswa, driving back to Nairobi to fetch his wife after dark, clambering about in lava caves catching bats, coping with an unfortunate VW whose engine caught fire and set alight to the countryside, beating out most of the flames, and then driving home with six spare wheels on his roof, one of which bounced off at one point and rolled gaily past us into the bundu.

It was indeed an excellent field meeting, led by Dr. Mutere, to his favourite bat hunting ground. The track up the mountain proved negotiable by all the cars, including the littlest ones nobly driven, thanks to the work of Mr J.W. Simons of the Kenya Guano Co. Ltd., who is mining guano there. Our camp site was in the cave area, i.e. where the lava flowed out of the main caldera on the south-east of the mountain, with plenty of space and shade trees.

The caves are full of interest, and Dr. Mutere gave a brief introductory talk about them before leading us to the bats on Sunday morning. He mentioned the excellent paper by P.E. Glover, E.C. Glover, E.C. Trump and L.E.D. Wateridge which appeared in *Studies in Speliology*, Vol.1, Part 1 in 1964. (This journal originates from the British Museum of Natural History and contains authoritative articles on news and events in the international world of caving.) The article by Glover *et al.* (one copy in the Society's library) is certainly worth reading for enlightened information about Mt Suswa. Well over 40 caves, or lava tubes, have been located in this area of Suswa, the entrances to which have a characteristic vegetation, well illustrated in the article. Dr. Mutere went on to tell us about the bats, two species being on record as using the lava caves, one more abundant and easily obtained than the other. They are insectivorous and not to be found in all the caves. It is yet to be explained why the particular cave in which they are found is preferred to the others.

Proceeding to the cave we found the entrance was a large collapse hole surrounded by the curious vegetation already mentioned, of which the most easily recognisable plants (to the layman) were the palm-like growths *Dracaena* sp. nov. and the wild figs *Ficus* sp.. After climbing over very sharp lava boulders on the floor of the cave, where torches were necessary, two or three other collapse holes, impossible to climb into or out of, were passed and then the ground became soft and spongy and bat noises were heard. A little farther on and bats were all around us, clinging to the roof in bunches and flitting hither and thither constantly squeaking. Dr. Mutere then proceeded to catch some. With the aid of a deep canvas bag on the end of a long, long pole, he reached up to a large bunch of bats and gently shook them into the bag. One member of the party tried his skill with the catching bag without success - "beginner's luck" was not operating. The interesting thing was that the first cave only produced male bats, whereas the inner cave seemed to contain only females - a phenomenon which Dr. Mutere will doubtless be investigating among many others concerning this bat colony.

The lava flows through the tunnels had produced fascinating patterns on the walls; as it cooled the lava formed ropes and whorls and circles and stubby stalactites as well as great smooth sheets in some places. There were other items of interest to zoologists in the caves, notably many bones of small mammals and birds; a tiny grey and white mouse scurrying into a hole, and lizards of two different species that seemed to like living in the lava. Keen members collected samples of guano, a live bat and any bones they could find.

We were lacking a botanist to identify the plants, but to quote from the paper mentioned above, the following are all to be found growing in and around the collapse holes: a large wild olive *Olea africana*, two creepers *Phytolacca dodecandra* and *Coccinea* sp., bracken *Pteridium aquilinum* and other ferns, nettles *Girardinia condensata* and a tall shrubby hibiscus *Hibiscus ludwigii*, as well as the *Dracaena* and *Ficus*.

Birdwatchers observed round the caves many Red-winged Starlings *Onychognathus morio*, Speckled Pigeons *Columba guinea* and Rock Martins *Hirundo fuligula*.

Later in the day most of the members, having struck camp, motored farther into the caldera to a spectacular viewpoint overlooking the moat and "floating raft" in the middle with Suswa peak and its explosion crater towering beyond. Here again one could see patches of the distinctive lava hole vegetation round the sides of the moat, denoting extensive lava tubes beneath the caldera floor.

The journey back to Nairobi, as mentioned above, was fraught with incident, and we commiserate with Miss Martin, whose VW it was that, after hiccoughing valiantly for most of the way on the very dusty track, finally gave up the ghost. We would also like to honour those members who came along and beat out the worst of the bush fire until it finally got away from them across Masailand.

Barbara Debenham,
E.A.A.F.R.O.,
Box 30148,
Nairobi.

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Mrs J. Standish King has supplied a list of birds recorded on the Mt Suswa weekend camp, space does not allow this to be included but it will be filed in the "Locality List File" which is available in the Library for consultation.

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HORSEFLY OBSERVATIONS

The Tabani constitutes a large subfamily of biting insects distributed over an extensive area of the Ethiopian region. Their breeding habitats are not well known but, where recorded consist mainly of vegetation and soil on the edge of running water and pools. The development stages are normal for Diptera and the "overwintering" period is usually as a larva. However, occasionally differences occur and this note describes a particularly interesting phenomenon in *Tabanus biguttatus*.

In 1930, the formation of mud cylinders was first described by Lamborn in Nyasaland and proved to be formed by larvae of *T. biguttatus*. Subsequently this was confirmed by Gray who found them on the Ruo and Shire rivers. In his monograph, Oldroyd describes the distribution of *T. biguttatus* as extending over large areas of the Ethiopian region, but added that the cylinders had not been recorded elsewhere.

I found cylinders in the Monze area of Northern Rhodesia in 1957 and on arrival in Kenya found a number on a farm at Malindi in September 1960. The farm was visited following a period of abnormally heavy rains; therefore this may not constitute the normal time of year for the establishment of such cylinders.

The cylinders are found in drying mud pools. The larva takes advantage of the soft mud to prepare the cylinder. The normal procedure is for the larva to circumscribe the mud in a descending spiral. It then penetrates the resulting cylinder and hollows out the centre to the surface again, finally ensuring that there is a plug covering the hole. This procedure ensures that the cylinder remains intact when the surrounding mud areas dry out and crack. It is normal therefore, to find the cylinders as smooth discs, when looked at from above, in the intersecting cracks of the drying mud. Within the cylinder, the developmental process of the larva to pupa and adult stages takes place. The final stage is reached when the pupal case containing the mature imago is forced to the surface to enable the adult to be released. The empty case can be seen in the central hole of the cylinder for a short period after the departure of the adult.

The cylinders recovered from Malindi, all produced *T. biguttatus* on hatching, the first adult appearing six days after the start of incubation. Hatches were obtained from all twenty five cylinders collected, seven males appearing within the first ten days and eighteen females in the following sixteen days. The cylinders had been removed from their original site and placed in a laboratory incubator for hatching purposes so that the period given may not have a direct bearing under natural conditions. Hatching is usually successful except when the cylinders are removed before the larval stage has transformed itself into a pupa. The larva under these conditions will break out of the cylinder and endeavour to form a new one.

The reasons for the establishment of the cylinders are not clear. It is thought that normal development usually takes place outside this system, but it appears that heavy rainfall may be a factor amongst many. Furthermore only two other species of *Tabanus* have been recorded as producing cylinders and then only very rarely.

John Tremlett,
P.O. Kabete.

AFRING

I recently attended the XVth International Ornithological Congress in The Hague. The Society made me a grant which covered over half my expenses and I am tremendously grateful to them for making the visit possible.

The main reasons for going to the Congress were to represent East African ringers (we have the second largest scheme in Africa) and to take part in discussions on international cooperation between ringers.

The schemes in Europe are connected through an organisation called EURING which will eventually act as a central store and sorting office for all recovery data of birds ringed in Europe. All recovery data are stored on IBM cards and of course space can be further saved by transferring these data to magnetic tape.

At the Congress AFRING was formed with Prof. A.F. De Bont, Lovanium University, Kinshasa, Congo as President and Clive Elliott, Percy Fitz Patrick Institute of African Ornithology, Cape Town as Secretary.

First of all it had to be admitted that none of the representatives had been able to raise any money for the establishment of an headquarters, however it was agreed that, at this stage, there was no need for one judging by the success of EURING (technically Paris is the EURING H.Q. but, as yet, no building has been designated to house the data and officers). Data can be exchanged on an informal basis in the initial period before an Headquarters is established. The Secretary had already prepared a draft coded list of all the species of birds found in Africa; this list, using White's nomenclature, gives each species a number which is necessary for the future computerization of our recoveries. AFRING members will use a standard set of recovery forms, identical with EURING forms except that a different selection of languages will be provided on the finder's copy; we have been using these forms in East Africa for over two years and the selection of languages on the E.A. Scheme's finder's copy includes Kiswahili.

In the past, birds have sometimes been ringed in Africa with European rings; this has caused difficulties when the particular African country has started its own scheme - recoveries of the birds wearing European-addressed rings get "lost". It was resolved in The Hague that the European schemes should go through their records and supply all details of old recoveries of birds ringed in Africa to the respective African schemes.

Co-operative projects, some of which are already operating in Europe, should take priority wherever possible; examples are, the ringing of Hirundines, Wagtails *Motacilla* spp. Ruff *Philomachus pugnax*, *Sylvia* warblers and Palearctic birds of prey. Future projects can be announced in *THE RING* which is the International Ringing Bulletin published in Wroclaw, Poland by the Polish Zoological Society and edited by Dr. W Rydzewski.

To summarise, the AFRING meetings achieved much towards the sound future of ringing in Africa, in addition they gave us the chance of meeting our colleagues in other countries, always a useful excercise.

The rest of the Congress went off without a hitch; the Netherlands Congress Centre is an ideal building for such gatherings. The only criticism that I, and many others, had was that too many papers were accepted for presentation. This affected the delegates in two ways: a) there was never enough time for discussion after a paper had been read, indeed, there was often no time at all. b) there were too many parallel sessions and one often wanted to be in two or more places at once. Nevertheless there was ample time for informal discussions (although one always wanted more!) and it is through these that the worth of such large conferences is realised.

Graeme Backhurst,
Ringing Secretary,
P.O. Kabete.

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DIANI FOREST - OCTOBER 1970

The Coast - around Diani at any rate - seems much drier this year than usual. The leaves underfoot in the forest crackle and twigs snap. There have been grass fires further inland. Indeed, one of these was stopped only a few feet from our hide set up, as it was, over a Greenbul's nest in a patch of Lantana scrub. Fortunately no damage was done and the bird was not in the least disturbed.

Dry though it had been, we found and photographed a Brown-breaste Barbet *Lybius melanopterus*, feeding its young in a nesting hole in the top of a Kapok tree; a mousebird *Colius striatus* just one day after the first egg was hatched, and a green Pigeon *Treron australis* with young rather high up in the outer branches of a big Mango tree. This latter, we managed to approach only by erecting a tripod of three 12 foot Mangrove poles and sitting on top of this, using light reflected from the sun by an eight inch shaving mirror adjusted by an helpful African below. The bird took no notice whatsoever of these goings on.

More cautious was the Mangrove Kingfisher *Halcyon senegaloides* who would not approach to feed his young whilst we were around. One of the most favoured articles of diet for the chicks is lizards, and one wonders just how they manage such large mouthfulls.

Rain did however, fall last night and more heavily this morning, and from having been rather quiet, the forest is now alive with birds. We started our evening walk - all of a hundred yards out and back - at 5.30 p.m. Very rewarding.

The Green Barbets *Buccanodon olivaceum* were 'clonking' from the tree-tops. Black-headed Orioles *Oriolus larvatus* were unmistakable from their lovely liquid notes, and there appeared to be many more African Golden Orioles about than in former years.

The three prizes of the evening however were all clearly seen and unmistakably identified.

Narina's Trogon *Apaloderma narina* was flitting from tree to tree turning his head this way and that in search of insects. The Red-capped Robin Chat *Cossypha natalensis* was confiding and friendly and gave himself away by the noise he made as he hopped from the low branches to the leaf-strewn forest floor in search of insects. Finally, the Red-tailed Ant-Thrush *Neocossyphus rufus*, after calling several times from the dense bush flew to a high perch, and in full view displayed his deep chestnut shining in the evening light.

Van Someren, in his "Bird Watcher in Kenya" emphasises the importance of sitting still in the forest for the birds to come to the watcher rather than vice-versa, and this was abundantly proved this evening.

The Paradise Flycatcher *Terpsiphone viridis plumbeiceps* (Grey-headed Paradise Flycatcher) was active, as was another small grey-brown flycatcher and it is tempting to go on to mention Sunbirds, Glossy Starlings and Warblers, but no positive identifications were possible. Suffice it to say that the fall of rain has greatly livened things up here.

As we left at 6.30 p.m., that most delightful of all the songsters, the Eastern Bearded Scrub Robin *Cercotrichas quadrivirgata* was starting to sing. His long sustained call with trills and mimickings, whistles and chatterings is better than any other bird we know, but he is easy to miss if one does not tune into him with care.

Geoffrey & Dorothy Irvine,
P.O. Chogoria,
via Meru,
Kenya.

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THE PRELIMINARY BIRD CHECKLIST

We are very grateful to those people who have written to us pointing out mistakes in the List - it was fortunate that we used the word "Preliminary" in the title! Additions and corrections are still required and will be invaluable when a definitive list is prepared.

We should welcome letters for publication in the *Newsletter* from biologists - not just ornithologists - with views on the sequence to be used in faunal (or floral) lists. The modified alphabetical order used in our list - although explained in introductory remarks - has, we know, upset many people. Please send in your views.

Graeme & Daphne Backhurst,
P.O. Kabete.

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AGGRESSIVE BEHAVIOUR IN SPAWNING TROUT

There are too many articles about birds in these new-look newsletters. This story is about fish.

On the sixth of September 1970 many of the Rainbow Trout, *Salmo irideus*, in the Thika River were spawning. In one particular pool a hen fish of about 2 lb. was attended by two slightly smaller males. The writer spoilt the fun by hooking the female. Immediately one of the males rose from the redd and chased the hen round the pool as she attempted to escape. He swam beside her buffetting her with powerful flicks of his tail. As she tired and swam more slowly, the cock fish drew off alongside and turned and butted her flank head on. He gave up only when the hen fish was within a yard of the landing net.

A minute or two later the excited cock fish was hooked. Immediately the second cock rose from below the redd and repeated the same buffetting and butting routine as his fellow had meted out to the hen fish. This time the angler was not so lucky and the hooked fish became entangled in a sunken branch. The other male, however, continued buffetting for several minutes while the angler undressed and waded in to recover his tackle and, hopefully, the fish. Both got away in the end!

W.G. Dyson,
E.A.A.F.R.O.,
Muguga.

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TO COAST MEMBERS

There is now fruiting along the Coast an under storey shrub to 20 ft. tall of which we would like leaves and fruits. It is a new *Drypetes*, Euphorbiacaea. Its Swahili name is *Mbage na Mbage*. It has ovate leaves 2-6 cm long by 2-2.5 cm wide, apex narrowly acuminate and apiculate, margins more or less revolute and coarsely and distantly serrate especially towards the apex, base cuneate and more or less entire, blade prominently reticulate above and below with mid-rib slightly to the side peticle very short. Flowers 1-6 in clusters in the axils of the leaves, green and inconspicuous , very shortly stalked or sub-sessile. I am told it is also cauliforus (stem or branch flowering). The stalkless fruits look like a miniature lemon 4 cm long by 3.5 cm thick, the skin is covered with small warts and is about 3 mm thick, it has three thick triangular seeds about 2.5 cm long two sides of which are flat but the back rounded.

Leaves and fruits are much desired of this very interesting plant which is said to grow on the beach.

P.J. Greenway,
E.A. Herbarium.

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A MELANISTIC COMMON SANDPIPER *TRINGA HYPOLEUCOS*.

On 30 November 1969, at about 10.00 a.m., a dark sandpiper was seen on a beach near Mombasa among Ringed Plover *Charadrius hiaticula*. Because of its behaviour (typical whipping of the head and tail and its flight, low over the water with quick wing beats and sailings on drooping wings), it was identified as a Common Sandpiper

The bird was seen for about half an hour with 8 x 40 binoculars at a distance of 10 - 20 metres.

The following description was noted down: The legs and bill were black. The whole bird (including tail) was dark brown to almost black above as well as below. Near the eyes it seemed very black. When the bird was flying, a very faint indication of a light wing bar was seen. The bird looked healthy and in good condition.

G.G.M. Schulten,
Box 5200,
Limbe,
Malawi.

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RINGING NEWS

The season has got off to an excellent start, at least in the Rift Valley and around Nairobi; fair numbers of waders and swallows have already been ringed and I would ask all ringers to concentrate on these groups if at all possible.

There are no recoveries this month, but two controls:

Charadrius tricollaris Three-banded Plover

A.8125 5G. 8.3.70 Naivasha, G.C. Backhurst.

V 19 5.70. Lake Nakuru. G.C.B. 55 km NW.

Calidris minuta Little Stint

J.24353 Ad. 15.3.69. Naivasha, G.C. Backhurst.

V 10.10.70. Lake Nakuru, G.C.B. 55 km NW.

CORROSION OF METALS

Some of the rings used on long-distance migrants have become badly corroded after a few months. Should any member be a metalurgist with knowledge of corrosion in aluminium and nickel alloys I should like to discuss our problems with him.

G.C. Backhurst, Ringing Secretary.

EYE COLOUR OF THE BLACK-BELLIED GLOSSY STARLING

On 20 August 1970 we netted an adult Black-bellied Glossy Starling *Lamprotornis corruscus* in forest at Mambosasa, near Witu, Kenya. According to Jackson (The Birds of Kenya Colony and the Uganda Protectorate) the iris colour of this species is golden yellow as was the right iris of our bird, but the left iris was red. While the bird was being weighed and measured, the colour of both irides changed simultaneously - red to golden yellow and golden yellow to to red. A few moments later the right iris changed from red to golden yellow again so that when the bird was released both irides were golden yellow.

During further activity in the Coast Province in August, both at Mambosasa and Watamu, we handled three more individuals of this species, all adults. Two of these had the normal golden yellow iris colour but one had different coloured irides, one red and one golden yellow. Many birds were observed in the field, all with normal irides.

The entry 'Iris colouration' in A New Dictionary of Birds mentions iris colour changes associated with age and season, but neither of these would be sudden as in the instance described in this note. It is presumably a very uncommon phenomenon in birds although it may not be so in this species.

Peter & Hazel Britton,
Sawagongo Secondary School,
Private Bag,
Yala.

REQUESTS FOR INFORMATION

1. Some of us are preparing a paper which will be offered to the Hon. Editor of the *Journal* dealing with rare and uncommon Palearctic birds in East Africa. We have found that several species have never been formally recorded i.e they do not appear in Jackson, Mackworth-Praed & Grant, White or Vaurie although they are featured in popular works such as John Williams' two Field Guides and various lists produced by the National Parks .

We therefore appeal to all members with records of unusual Palearctic birds to send them in (to me please); we have no "Ten Rare Men" as they have in U.K. but records should have supporting details. Please send all records but information is particularly required on Phalaropes *Phalaropus* spp., Dunlin *Calidris alpina*, Knot *C. canutus*, Temminck's Stint *C. temminckii* and palearctic species of Snipe *Gallinago* spp. including *G. gallinago* from Tanzania (not sight records for this species please) and the following Palearctic duck Teal *Anas crecca*, Mallard *A. platyrhynchos*, Gadwall *A. strepera* White-eyed Pochard (Ferruginous Duck) *Aythya nyroca* and European Pochard *Aythya ferina* which is recorded in a "popular" book on Uganda birdlife.

2. The request for records of the House Martin *Delichon urbica* has resulted in several most interesting letters, I am most grateful to those people who sent them, however, I would like to repeat my request as I am sure many more members have notes on seeing this bird in East Africa.

3. The plea for information on Swallow roosts has produced no replies at all, please let me know if you find a roost.

Graeme Backhurst,
P.O. Kabete.

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LETTERS TO THE EDITOR

CROCODILES IN MURCHISON FALLS NATIONAL PARK

Sir,

On a recent visit to Murchison Falls National Park in North Western Uganda, my clients and I took the launch trip up the Victoria Nile to the base of the spectacular falls and I was horrified by the decline in numbers of crocodile on that seven mile stretch of water.

Between 1953 and 1961 I lived in Kampala, and on two occasions my parents and I visited the Park and took the launch trip. I can remember that in many places the whole bank became alive as the launch approached as up to fifty crocodile fled to the water, giving the characteristic flick of the tail as they did so.

The vast numbers are not just a childhood memory as my parents have photographs of rafts of crocodile sunning themselves on the bank, and the majority of them were large.

On this visit fifteen to twenty of them were seen, only one of which was large, the rest averaged, at a guess, 6 - 7 feet. Let us hope that now the numbers seem to be so low, poaching will stop, at least within the Park boundaries, because it is no longer profitable to the poacher himself.

I believe the captains of the launches which take visitors up the Nile, have strict instructions from the Park authorities not to go close to the crocodiles on the banks becuase, once disturbed off their nests, the Monitor Lizard (which is the crocodile's second greatest enemy next to man) moves in and will eat the eggs.

However, Murchison Falls Park seems to be a fitting place to end a safari. We drove round the Buligi Circuit in the afternoon and saw three Wide-lipped (White) Rhino, giraffe, Uganda Kob, Buffalo, Elephant and Spotted Hyena. In the middle of the night a loud "chomping" noise outside the rooms woke me, and on looking out I saw two Hippo acting as very efficient lawn mowers in the lodge grounds, and as my American clients said, there must be

very few places in the world where Hippo graze outside one's bedroom window ar night!

On our way out of the Park the following day we stopped at the top of the falls, and this sight will stay in the memory of any visitor to Uganda as one of the most spectacular sights East Africa has to offer.

Denise Angwin,
c?o Safari Desk Ltd.,
Box 7272,
Nairobi.

Sir,

For about a month we have had a *Gracula religiosa*, otherwise named Hill Mynah, in our garden. I have checked it against the illustration of a Hill Mynah on page 272 of O.L. Austin's book, "Birds of the World"

Its favourite perch is a large Avocado Pear tree, where it sits and sings for hours, imitating other birds.

I think it must be an escaped pet. Have any of your readers lost one?

Louis Schofield,
Box 30588,
Nairobi.

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APPOINTMENTS

Dr. Tom Odhiambo has been elected Chairman of the Museums Trustees of Kenya and John Karmali has been elected Vice-Chairman. We offer them both our congratulations.

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CONTRIBUTIONS

Please send all contributions to the *Newsletter* to me at P.O. Kabete, Kenya and NOT to the Society's Nairobi Box Number. Remember to include your address and also indicate how you want your name to appear, e.g. "J. Smith" or "John Smith"

Editor.

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THE JOURNAL

We are sorry to announce that the *Journal* No.119 is still delayed, this time due to a paper shortage in this country. We are hoping that it will appear during November (1970).

SOCIETY FUNCTIONS

Monday, November 9th. - Lecture by Mrs J. Rudnai on Lions, in the Ford Foundation Hall, National Museum at 5.15 p.m.

Sunday, November 22nd. - Field trip to the Athi River area: meet at the National Museum 9.00 a.m.

Monday, December 14th. - Lecture by Mr I. Parker on Elephant Biology, in the Ford Foundation Hall, National Museum at 5.15 p.m.

SOME RECENT PERIODIC LITERATURE AVAILABLE IN THE LIBRARY

Benoit, P.L., Synopsis des Filistatidas africains (areneae). *Ann.Mus.Civ. Stor.Nat. Genova*, 77:92, 1968.

Brown, L.H. & Emil K. Urban. New and unusual records from South-west Ethiopia. *Bull. B.O.C.* 90:82, 1970.

Every, R.G., Sharpness of teeth in man and other primates. *Postilla*, No143,'70.

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THE *JOURNAL* - IMPORTANT NOTICE

In an effort to overcome the difficulties of getting the *Journal* printed, it has been decided to follow the example of *The American Museum Novitates* and many other publications, to print each article seperately as it becomes ready, instead of waiting until a whole *Journal* has been assembled.

Reviews, short notes and correspondence will appear in this *Newsletter* which is a regular monthly publication. The *Newsletter* is being sent, starting with this issue, to all libraries and institutes who exchange their publications with the *Journal*; in addirion, it is being sent to all members of the Society throughout the world.

Editor.

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LAMU. A member has two old Arab style houses to let, simply furnished and equipped for 4 and 6 persons respectively. In town, close to sea front, with housekeeper who will cook, shop and clean. Mrs Unwin, Box 30362, Nairobi. Phone 58405 office, 21611 house.

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NEWSLETTER

SMITHSONIAN
JUN 14 1972
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Editor: P.O. Kabete, Secretary: Box 4486 Nairobi, Kenya.

CONTENTS

The Kenya Reef - 51

Mousebird Observations - 56

Nest Record Scheme - 57

Book Review - 58

Ringing News - 60

Flatflies - 61

Request for Tape Recordings - - - - - - - - - - - - - - - - - - 62

Request fot Information - 62

A Nairobi Record of the African Pitta - - - - - - - - - - - - - 63

A Record of the African Pitta from the Kenya Coast - - - - - - - 64

A Record of the Pitta from Ngorongoro, Tanzania - - - - - - - - 64

Letters to the Editor - 66

Society Functions - 67

Library Notes - 67

Important Notice - 68

THE KENYA REEF

The vertebrate and invertebrate faunas of Watamu Marine National Park and of the offshore islands at Shimoni are generally recognised as being equal to any found associated with coral reefs elsewhere in the world. I am not writing of these and other comparable areas of our reef, but rather of those great stretches that run along beaches such as Diani and Tiwi. These are often described as "dead"; nothing could be further from the truth. I shall confine myself to a brief generalised description of the Diani reef as representative of many miles of Kenya reef, and to a few families of the common, inshore, bony fish found there. The invertebrates, including the corals, will not be mentioned. I have continuous access to but one reference book to our Kenya reef fish, the Smiths' (1963) excellent "Fishes of Seychelles", from which we have learnt the little we know.

All Kenya reefs are *fringing*, as opposed to *barrier*, reefs; they are in continuity with a stable land or island mass that is neither sinking nor rising. The reef itself consists of a rocky platform, 100 metres or more wide, exposed at low tide, and some hundreds of metres from shore; the width of the lagoon thus formed is very variable. The living, growing reef coral is to the seaward side of the platform.

A great diversity of habitats is found on the reef platform and in the sheltered, warm inshore area of the lagoon. These are: (1) Reef Pools, varying in size from small rocky depressions to large, deep, irregularly shaped pools and extensive lagoonal inlets and bays; the bottom of these may be sand or rock. (2) The Lagoon, which has at least six distinct zones:

i) rocklike, coral debris, immediately inshore of the reef platform, mostly a shallow area.

ii) lagoonal channels, often deep, with sandy bottoms.

iii) living coral mushrooms, often large.

iv) the *Cymodocea ciliata* zone. *Cymodocea* is not a seaweed, but a marine angiosperm or flowering plant of the aquatic family Potamogetonaceae. It supports a wealth of small fauna which, with the plants themselves, form rich grazing fields and cover for many fish species.

v) rocklike ancient coral outcrops, 50 - 100 metres offshore.

vi) shore-line shallows; These may be sandy or of old eroded, exposed coral outcrops; true seaweed growth may be abundant or absent.

Strong-swimming, often predatory species occur in the lagoonal channels (as do the flat fish and the rays) and in and around the *Cymodocea* fields. The greatest concentration of species, however, occurs where the greatest amount of protective cover exists, in the reef pools, around living coral bosses and the rocklike ancient coral outcrops. Other habitats are of much

interest, but we will concentrate on those which support quite incredibly diverse populations. In general, though with notable exceptions, the fish found here are smaller and are not strong swimmers; they require the protection that the honeycombs of living and dead coral and coral rock provide.

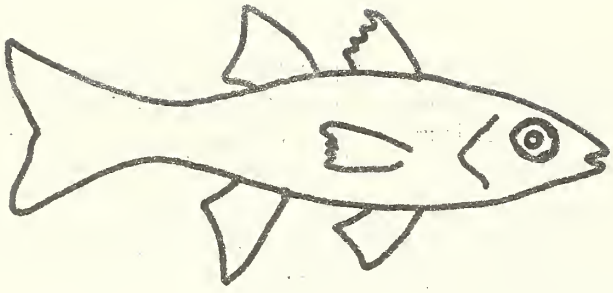
Very brief accounts of a few families are given. They have been selected because they are well represented in genera and species, or are very common. The species within these respective families all conform to unmistakeable basic shape patterns, as can be seen from the illustrations.

1. APOGONIDAE. Mostly small (5 - 13cm, occasionally larger) colourful fishes, living around coral or among weeds and rocks fairly close close inshore. They are easily identified by the 2 dorsal fins which are a constant family character; eyes are large; many have pink fins. Some species live in small shoals. They are abundant in suitable habitats along the Diani reef. *Paramia*, with 5 horizontal black stripes, and *Cheilodipterus*, with numerous similar stripes, are very common.

2. CHAETODONTIDAE, the butterfly fishes. Unmistakeable, attractive, often brightly coloured, the genus *Chaetodon* is well represented and common. Many species have a vertical, black eye stripe. *Heniochus monoceros*, the coachman (23cm), and the charming, long-nosed *Forcipiger longirostris* (15cm), are included in the family.

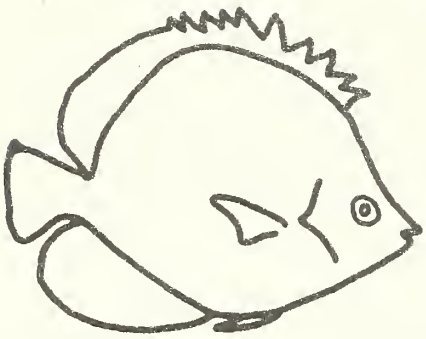
3. ACANTHURIDAE, the surgeon or lance fishes, have a small erectile spine at the base of the tail which is razor sharp; the larger species require handling with some care. *Acanthurus triostegus* (23cm), the aptly named convict surgeon, whitish with 4 to 5 vertical black stripes, and *A. lineatus* (30cm), the striped surgeon, are both very common. One of the most attractive of all reef fish is the white-breasted surgeon, *A. leucosternon*, (23cm) which has a black face, blue body, yellow dorsal fin and black and white tail. *Zebrasoma veliferum* (30cm, juveniles more commonly seen 8cm), the sailfish surgeon, has comparatively large sail-like dorsal and anal fins.

4. POMACENTRIDAE, damsel or coral fish. A large family, well represented in genera, often brilliantly and irridescently coloured, which includes many distinctive and remarkable species. The genus *Abudefduf* belongs to this group; they display strong territorial behaviour and will attempt to see off, from the environs of their coral homes, an intruding foot, hand or goggle. The sergeant major *A. septemfasciatus* (18cm), with alternating horizontal black and yellow stripes, is very common. The young of *Dascyllus trimaculatus* 2 - 3cm), jet black with three conspicuous white spots, live in the large green sea anemones; adults (12cm) live about the coral. The clown or anemone fish, *Amphiprion epihippum* (10cm), also lives among the sea anemone tentacles. Why these two species should not be



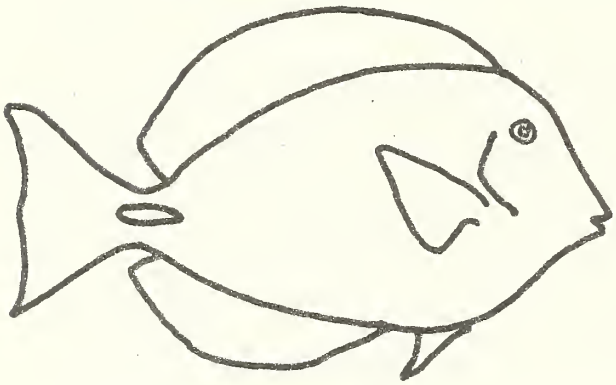
APOGONIDAE

BALISTIDAE



CHAETODONTIDAE

LABRIDAE



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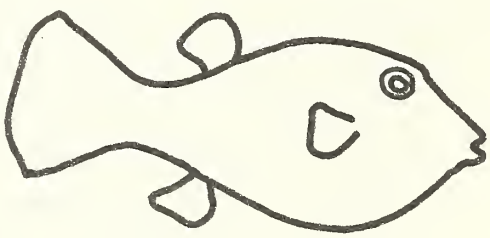

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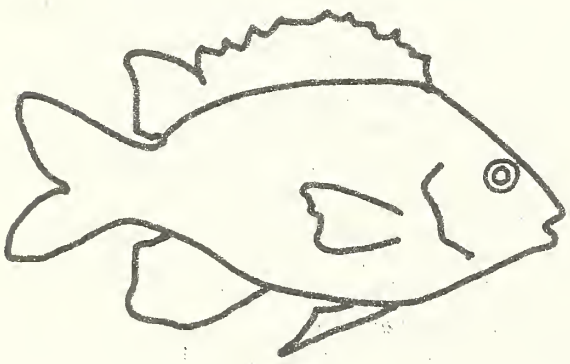

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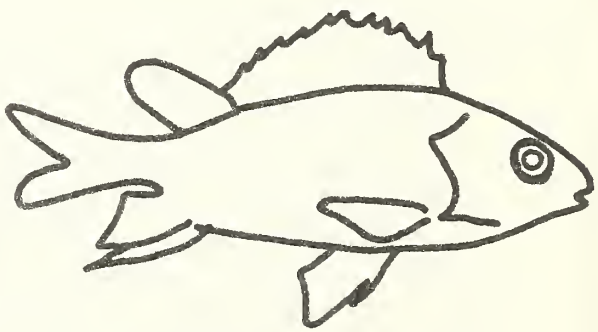

HOLOCENTRIDAE

stung and devoured by the anemone awaits satisfactory explanation.

5. LABRIDAE, the rainbow fishes, or wrasses. Again aptly named, this family is abundant in genera and species. Many burrow into the sand; several species exhibit extreme colour pattern differences between juvenile and adult forms. Perhaps the most easily recognised species are *Coris africana* and *C. formosa*. Juveniles (5-7cm) are pillar-box red with white, edged with black, patterns on the body. Adults (30cm) bear no resemblance to this colour scheme but, with the brilliant blue, green or turquoise facial patterns, are still attractive fish. Perhaps the most fascinating and very common Labrid is the electric-blue cleaner wrasse, *Labroides dimidiatus* (7 - 10cm), which removes parasites and fungi from, and cleans up the wounds of, a great variety of reef fish. It has a very characteristic swimming motion, dancing up and down and swaying its tail; this is the invitation dance which indicates to the next customer to come forward.

6. BALISTIDAE, the trigger fish. Although, in comparison with the wrasses or damsels, the family is small, trigger fish are common. The scales are fused to form a hard case; an unmistakeable character is the first dorsal spine, which can be locked erect by a knob on the second. The spine is often flicked up at the approach of other species, and this may serve as an admonitory gesture. The spine is also erected when the fish retreats into a small crevice, when, thus braced, it cannot be removed.

7. CANTHIGASTERIDAE, the sharp-nosed puffers. The family is represented by only a few species of *Canthigaster* (7 - 25cm), but they are common, and most pools and coral mushrooms have at least one species in residence. Their method of propulsion, by undulating their fins, is both characteristic and delightful. They can reverse, hover, or move off diagonally.

8. HOLOCENTRIDAE, the soldier fishes (20 - 30cm), also known as squirrel fishes or Welshmen. The common species are red; they are rough and spiny with 4 anal spines as a constant character. The genus *Holocentrus* usually has one or more prominent spines on the gill cover; *Myripristrus* does not. *H. diadema* (30cm), deep red, with about 11 horizontal white stripes and with the spiny dorsal mottled black and red, is common. Soldier fish are all very wary, hiding in dark holes and crevices or under coral ledges. Eyes large.

It is impossible to describe adequately, or to begin to do justice to, the extraordinarily diverse and fascinating fauna of the reef; the number of species of East African reef fish alone has been estimated at 1 200. This note may hopefully serve to elicit interest in an area of natural history that is equal to, and probably surpasses, most others. I hope,

in some future note, briefly to desribe other families; the moorish idols, the box, porcupine, scorpion, stone, pipe,snapper and parrot fish, the blennies and the moray eels. Species of most of them, and those described here, may be seen in one morning's quiet goggling.

K.R. Bock,
Muguga, Box 30148,
Nairobi.

Note on size. Where sizes are given, that stated (Smith & Smith, 1963) is the greatest length ever reliably recorded.

REFERENCE

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MOUSEBIRD OBSERVATIONS

The blue-naped mousebird *Colius macrourus* was observed to have a peculiar habit of disposal of the faeces from the young. Whereas in many bird species the faeces are removed in a faecal sac by the parent bird, or defaecation over the side of the nest, the parent mousebird ingests the faeces of its young.

The actual feeding process was also interesting to watch as the young solicited food from the parent on the nest after they were brooded. It was usual for the parent bird to return from food collecting and sit in the nest covering the young for periods up to thirty minutes or so before feeding them. The young birds solicited food by putting their heads up along the breast (the back of the head towards the parent) and rubbing up and down and also making some movement with the wings to and fro from back to front. The parent bird then put her beak inside the beak of the chick and with a rapid up and down pumping motion forced, or rather stuffed, in the food until there was room for no more. Any overflow was re-swallowed by the parent.

Both young were fed at the same time and on completion they turned round and exposed their underparts soliciting defaecation attention by moving their short tails from side to side. The parent then stroked the anus with her beak and as the faeces were extruded swallowed them. After both chicks had been defaecated they returned to nestle under the parent who brooded for periods of ten minutes to an hour, then the feeding and defaecation procedure was repeated.

The procedure was watched most carefully many times, and on no occasion was the parent seen to dispose of the faeces in any way other than by swallowing them. The male bird also took some turns at feeding and the defaecation of the young. At one time both parents were sitting on the nest feeding the young ones (this was a few days before they left the nest).

Up to the time when they left the nest the young were never seen to defaecate over the side.

The food of the young was very young shoots from *Balanites aegyptiaca* which may also have been mixed with some of the flesh from the ripening seeds of this tree. During the early part of the brooding, when the chicks were small, the food may have been somewhat predigested by the parent, but at the later stages whole pieces of very green leaf would be seen being "shoved' down the throat of the young ones.

Perhaps this process of feeding and cleaning has been observed before with other *Colius* spp. and may be a behaviour characteristic of these birds.

Footnote: I dont like mousebirds very much - they steal my tomatoes, destroy nests of other small birds - and now their habits don't seem very pleasant either!

The family was netted soon after the young could fly and deported to another place twenty miles away. Unfortunately there are still a lot left!

Bill Langridge,
P.O. Mirogi.

NEST RECORD SCHEME

It is planned that as from the end of 1970 there will be an annual report on the progress of the E.A.N.H.S. Nest Record Scheme. Members with completed cards should, therefore, send these to me (Box 1102, Kisumu) during the first half of January 1971. Even if you have been able to complete only one or two cards we need them to make the report complete.

To date (31st October) there are 2,227 completed cards filed in the scheme, but the majority of these are from sources such as the Belcher collection rather than from the current activities of members.

I will be on leave in England from early November until early January and during this period, cards may be obtained from the Secretary, Box 4486 Nairobi.

Hazel Britton,
Box 1102,
Kisumu.

AN ATLAS OF SPECIATION IN AFRICAN PASSERINE BIRDS by B.P. Hall & R.E. Moreau. Published by the British Museum (Natural History) London 1970. Pages i - xv, 1 - 423; frontispiece and 2 plus 439 maps of 962 species. Price £15.

This beautifully-produced and well-presented book has certainly been worth the long wait of over seven years since its inception. Not only will serious students of African ornithology find it invaluable but, as Professor Ernst Mayr says in his Foreword, "it will serve as an important yard stick for all sorts of comparative studies", and not only in Africa but in all "warm climate faunas". He ends with: "It is to be hoped that the example set by this pioneering effort of accurately mapping the species and superspecies of a whole fauna, will soon be followed by others. The authors are to be congratulated on a superb achievement".

With this last sentiment all must be in agreement - even he who disagrees with the authors' arrangements will be stimulated to produce something which can only enhance the knowledge of African ornithology. but it will have to be watertight to stand up to what the *Atlas* has to say.

The whole work smacks of the meticulous accuracy we have come to expect of Mrs Hall, well-shown by her Pipit (1961) and Francolin (1963) revisions and other important studies. Because of her co-author's just fame, Pat Hall's contribution is likely to be overlooked - but this is really her *magnum opus*. Reg Moreau needs no introduction to African or, indeed, world ornithologists. His contribution to the present work has been of arbitrator, and his knowledge of African palaeoclimates and basic zoogeography (viz. his 1961 book) has been of immense importance in suggesting the possible sequences that might have been involved in speciation.

It seems that his pre-eminence as an editor was equally important, as shown by the following sentiment in the typescript of the *Atlas* (with facsimile Moreau comments) from Derek Goodwin's and Pat Hall's *Bird Room Ballads* (privately printed 1970):

"Their sharp, strong claws enable them to clamber over the hides of large ~~animals~~...." mammals

"It feeds mainly on ~~locusts and grasshoppers~~, but at other times on berries and fruit...." berries are fruit

D.G. (on behalf of B.P.H.) to R.E.M.

Dear Reg, tho' I'll admit you're right
To designate as mammals,
Such hot and hairy vertebrates
As buffaloes and camels;

In your vegetable objection
You are being just too cute,
To a bird, as to a layman,
There's a berry and a fruit.

In your insect designation, too,
You're on a sticky wicket,
To use the word Orthoptera;
It isn't (always) cricket!

The amalgam of balanced farsightedness and (editorial) caution has produced a work which reflects both individuals. It is a very great pity that Reg Moreau did not live to see this work in print.

The whole *Atlas* is based on the superspecies concept, nicely explained in the introduction as birds "which are immediately descended from a common ancestor and are nearly or completely allopatric" (do not inhabit same locality and/or habitat). Of the 962 species considered, just over half (50.5%) are included in superspecies, nearly one-third (31.2%) in species groups (the next higher taxonomic category) and less than one-fifth (18.3%) are inde-pendant species with no apparent very near relatives. Actually, many of those included in a superspecies are considered subspecies by other authorities. The rest of the introduction defines other terms and can hardly be bettered.

The two extra maps show collecting localities and the six simplified vegetation zones used on all the distributional maps. From the former it can be seen that, in East Africa, the least-known areas are the eastern parts of Kenya and the southern half of Tanzania. Uganda has a good scatter of localities but the recent work of the Los Angeles County Museum in the western forests shows that there are still surprises. Each superspecies or species-group is mapped by using symbols on the precise localities on a blue map of the vegetation zones, and in most cases the pattern of speciation is shown very well indeed. The text accompanying each map is clear and concise and explains exactly why a particular form was treated in a particular way. It is extremely difficult to fault any of the arrangements but some, as the authors say, can only tentatively be assigned to a particular group on present knowledge. This is where the amateur observer can really help - even a cursory examination of the *Atlas* will show them areas where a particular distributional or ecological problem might be solved. They should not be dismayed at the bulk and scholarship of the *Atlas* - as Mrs Hall says at the end of the introduction:

"In conclusion I would like to repeat what was said at the start of the introduction, namely that this Atlas was designed to be of interest to bird observers as well as systematists. At present too many field workers concentrate too much on rare species and ignore the problems which are posed by some of the common birds: too many handbooks and monographs, even some of the most painstaking, do not discuss the similarities and differences in ecology and habits exhibited by members of the same genus, though most will compare plumages. The study of speciation and divergence is a fascinating one. If this Atlas stimulates an awareness of the problems involved and the part that everyone can play in the study, then it will have served its purpose."

The end of the book is taken up by a table summarising the affinities etc. of all the species considered, and a most useful table of English names which give the equivalents for South, East and West Africa - this makes it extremely easy for the layman, who does not habitually use scientific names, to find the bird he is looking for. An appendix of literature consulted, a scientific index, and final addenda complete the work.

One tiny criticism, to my mind, is that several of the island forms which have no apparent near relatives are not considered (as explained on p.x) - I would have liked to have seen these included in an extra map, so that the *Atlas* would be truly complete.

Additions and reappraisals are inevitable - Mrs Hall has sent a list of these, and anyone interested can see a copy in the library *Atlas* at the National Museum in Nairobi.

This is one of the most important ornithological works of recent years and will be one of the most essential references; not only for birds but for other animal groups. I must stress the importance of having access to a copy. Its cost of £15 seems excessive but I understand that the official booksellers queried the price, as they thought it not enough!

A.D. Forbes-Watson,
Ornithologist, National Museum,
Nairobi.

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RINGING NEWS

Hardly news this month! Every year I have to plead with ringers to send in their schedules in batches at reasonable intervals i.e. not all at once in the middle of July or later. Iam asking again this year.

It might be as well to remind ringers how well off they are here compared with, for example, ringers in Britain: their rings cost half the British price (and some ringers have these bought for them by their employers); the ringing schedules are very simple to complete; there are no premiums to pay for the privilege of ringing certain species of birds; there are no professional ringing office staff to handle the issue of rings and keeping of records yet rings are sent by return. So in view of these benefits, I should appreciate if ringers would co-operate and make this seemingly supreme effort and send me some schedules (my apologies to the few who do). Finally, it would be appreciated if ringers would use the nomenclature of White when filling in schedules.

G.C. Backhurst,
Ringing Secretary.

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FLATFLIES (DIPTERA : HIPPOBOSCIDAE)

Like other organisms, birds play host to a variety of parasites both external and internal. In their feathers one finds the very specialized Hippoboscidae or louseflies which are totally dependent upon this environment (although there are some species restricted to the fur of mammals). "Flatflies" is a widely used popular term for the Hippoboscidae and it originates from their appearance - like small, flattened houseflies, usually greyish in colour but sometimes brightly coloured and metallic. Louseflies is a misleading term as they have nothing whatever to do with lice. For a parasite, they are large compared with the host so that the number of individuals on a bird is restricted. They live more or less permanently on the host, feeding on its blood.

Flatflies produce only one offspring at a time which they deposit as a full grown larva in the host's nest. This pupates immediately and it then remains in the confines of the nest until the next breeding season. Flies found on swifts, swallows and other birds which habitually use the same nest for more than one season have either lost the power of flight completely or have this ability much reduced. The wings of such species are, therefore, small and vestigial. If the species parasitises birds which build new nests each season, it clearly needs to be able to fly more strongly in order to find a host in the next season. Nestlings sometimes suffer considerably from these flies - the piercing proboscis causes immediate damage while the flies also act as vectors of avian diseases.

Handlers of large numbers of live birds - especially ringers - have the best opportunity of seeing and collecting flatflies as they sometimes leave the confines of the feathers when the bird is handled. More often, however, the fly escapes attention until the feathers are blown or otherwise disturbed, and even then it can often escape back into the feathers. If caught and stored in 70% alcohol they are interesting to entomologists as they are comparatively little known. Unlike the more host-specific feather-lice (Mallophaga) they can be identified with little difficulty by specialists. All the identifications below were made by Tony Hutson of the British Museum (Natural History) who will report on them fully elsewhere.

According to F. Zumpt (*Publ. S.Afr. Inst. Med. Res.* 13(52):79 - 99) only 43 species have been recorded in Africa south of the Sahara, 31 of these from birds. Some are found only on certain species or genera, for example *Struthiobosca struthionis* on the Ostrich *Struthio camelus*, whereas others show little preference in their choice of host. *Ornithoica turdi* has been recorded from over 40 species in the Ethiopian region and I have collected this from Red-chested Owlet *Glaucidium tephronotum* and Pigmy Kingfisher *Ceyx picta* in Kenya - disappointing in a way as I had naively expected something special from a bird as little studied as the owlet!

Ringers' experience in Kenya is that almost all the flies they find are on hirundines (swifts are seldom ringed but would probably provide many also). In particular, African Sand Martins *Riparia paludicola* almost

always have flies, often two or three per bird. Nevertheless it is worth collecting flies from these more mundane birds as the most interesting specimens which I have obtained have been from hirundines. Most exciting were 16 specimens of an undescribed species of *Ornithomya* from Red-rumped Swallows *Hirundo daurica* and Striped Swallows *H. abyssinica* at Kariobangi Sewage Works, Nairobi. But also interesting was the fifth known specimen of *Ornithomya roubaudi*, from an European Sand Martin *Riparia riparia* at Lake Nakuru, and 13 specimens of *O. fur* from *R. paludicola*, *R. riparia* and *H. daurica* at Lake Nakuru and Kariobangi; all previously known *O. fur* are from South Africa and Cameroons.

Peter Britton,
Sawagongo Secondary School,
Private Bag,
Yala.

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REQUEST FOR TAPE-RECORDINGS

At the recent XVth International Ornithological Congress at the Hague, Drs. Tjalling van Dijk and Wouter van der Weijden of the Department of Systematic Zoology and Zoogeography, Biological Laboratory, Vrije University Amsterdam, Holland, made an appeal, to anyone interested, for tape-recordings of Owl calls from all over the world.

They are making a study of the systematics, distribution and ecology (including audiophysiology and sound spectography) of owls. Although they have already had a good response from various institutions and private individuals, there are still considerable gaps to be filled (primarily of territorial song and contact calls), particularly as there is geographical variation in owl voices.

Full acknowledgement will be given to all authors of recordings and any member who is willing to help is asked to contact them direct.

Editor.

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REQUEST FOR INFORMATION

David Anstey, Warden of Awash National Park, Ethiopia, would be grateful for any descriptions, from old books or memoirs, of that part of Ethiopia (i.e. the Awash Valley and its surroundings) before the Italian occupation. Also any information about the range of Swayne's Hartebeest.

Box 386, Addis Ababa, Ethiopia.

A NAIROBI RECORD OF THE AFRICAN PITTA *PITTA ANGOLENSIS*

On 7th August 1967, Dr. F.M. Roberts, of the Coffee Berry Disease Research team, was visiting a friend in Nairobi. At about 4.30 p.m., a cat appeared, carrying a live bird which was subsequently identified as an African Pitta. Dr. Roberts checked the identification from a live specimen in Mr Sidney Downey's aviary at Karen. The bird was released, but it is not known whether it survived. (F.M. Roberts, pers. comm.).

This record is of particular interest since all previous records of the Pitta from East Africa near or on the equator are between 1st May and 7th June (Moreau, 1966) with a few Uganda records up to July. There are records further south, summarised by Burke (1969): from Itigi on 1st December; Abercorn (Mpulungu) in December; and Mwese in November. The Mwese bird flew south when released Burke, (*loc. cit.*). The August record for Nairobi therefore appears to be outside the known but very ill-defined pattern.

It is of interest to observe that the rainfall in Kenya in 1967 was rather abnormal, possibly because Ol Donyo Lengai in Tanzania was erupting. Intra-African migration of birds often seems to be associated with weather changes, so that conceivably unusual weather may have upset the usual pattern of Pitta movement in East Africa - if there is one. Alternatively it is possible that the Pittas which migrate north into East Africa in May and June, occuring as far east as Amani, may then swing westwards and perhaps follow the Western Rift southwards again in November and December. This can only be established by further records, and every record of a Pitta, accompanied by date, time of day, and locality, is accordingly of great interest.

I am indebted to Dr. F.M. Roberts for her permission to publish this record.

L.H. Brown,
Box 24916,
Karen

REFERENCES

Burke, V.E.M.(1969) The African Pitta *Pitta angolensis* Vieillot. *J. E.Afr. Nat. Hist. Soc.* XXVII No3 (118) p.233-5.

Moreau, R.E. (1966) The Bird Faunas of Africa and its Islands. p.235 -6 Academic Press, London.

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A RECORD OF THE AFRICAN PITTA *PITTA ANGOLENSIS* FROM THE KENYA COAST

In October 1965, while living at Diani, an injured bird of the above species was brought to our house by an African. He stated that he had found it on the road, and it would appear that it had flown into telephone wires or some such obstruction. Our cottage was close to the beach, and there was thick bush behind the cottage where the Pitta was found.

Apart from what looked like a wing injury, the bird was in good condition and even accepted insects of various sorts. When it was stronger, after a few days, we took it to Dr. and Mrs Ward who then lived at Nyali and who owned a small aviary. They, I believe immediately reported the find to Mr John Williams.

Dr. and Mrs Ward looked after the Pitta with great care, and it was doing well until tragedy struck in the form of safari ants who attacked one night and left only a pathetic heap of bright feathers. It had been a great joy to behold and to handle this very lovely bird.

H.L. Black.

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A RECORD OF THE PITTA *PITTA ANGOLENSIS* FROM NGORONGORO CRATER, TANZANIA

While having breakfast at the Ngorongoro Wildlife Lodge on 28th May 1970, I noticed an African Pitta lying at the foot of the plate glass windows which open on to the porch. The bird had evidently killed itself, as Pittas are known to do, by flying into the lighted window during the night. As there are few records of this bird from East Africa, and particularly from highland forests, a record may be of interest.

Benson and Irwin (1964), Moreau (1966) and Burke (1969) have all written on the migration of the African Pitta. The bird breeds from September to March from southern Tanzania to the northern Transvaal, migrating northward in the non-breeding season to the Congo, Uganda, Kenya and northern Tanzania. Moreau records some ten birds at Amani, all between 1st May and 7th June, which he feels were probably migrating northward (Moreau, 1966. p.235). Birds from Kenya, as reported by Benson and Irwin (1964. p.474), were also found in May and June. Burke (1969. p.234) guesses that they were migrating south, though from the context it appears that this may have been a misprint and that he in fact concurs with Moreau. In either case, the date of the specimen found at Ngorongoro falls in the same period and would indicate

that the birds move south through central Tanzania as well as on the east and west, from which all the previous May - June records have come.

Also of interest is the high altitude at which this Pitta was found (2 300m). Burke states that no records exist from the Kenya highland forests, though a record from Limuru (2 220m) might fit that description (specimen in the Chicago Nat. Hist. Museum). With records stretching from Kilwa and other sea level locations to well over 2 000m, the bird obviously tolerates a wide range of altitude.

Unfortunately, the Ngorongoro specimen had an unhappy ending. After asking permission from the Conservator's office, I took the specimen to the Game Department in Arusha to have the skin prepared. Although the skin was promised for the next day but one, a friend who called several times to collect it reports that it has apparently disappeared without trace. Fortunately I have a nice colour photograph of this beautiful bird.

John Gerhart,
Box 1081,
Nairobi.

REFERENCES

Benson, C.W. & Irwin, M.P.S.(1964) The Migrations of the Pitta of Eastern Africa. *The Northern Rhodesia Journal* Vol.5 No.5:465 - 475.

Moreau, R.E. (1966) The Bird Faunas of Africa and its Islands p.234-6 Acedemic Press, London.

Burke, V.E.M. (1969) The African Pitta. *J. E.Afr. Nat. Hist. Soc.* XXVII No.3 (118) p.233-5.

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That the Pitta is an intra-African migrant there can be no doubt; because it is so rarely seen, especially in its non-breeding "winter" range, all records received will be published, however, it would be appreciated if contributors could keep their notes as concise as possible. The latest resume of Pitta records is given by Benson, Brooke, Dowsett & Irwin *(Arnoldia (Rhodesia)* 4 (40) p.24-5. Notes on the birds of Zambia: Part V.).

Editor.

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LETTERS TO THE EDITOR

Sir,

THE SEQUENCE IN FAUNAL AND FLORAL LISTS

Taxonomy, though basically an artificial subject, is a useful tool for the biologist in that it greatly simplifies his work. However, a vast amount of man-power has been utilised in dead-end taxonomy and a great deal of space wasted in learned journals on sterile discussion of this subject. We should acknowledge it our slave, and not vice-versa!

For two reasons it is not possible to make a list of any group of living organisms, unless it be very small, which demonstrates true phylogenesis. Firstly, we are not in possession of enough fossil material, or enough information on extant members of most groups to be able to place each species with its closest relatives. Often what we do know is restricted to comparative anatomy, and much confused by convergence and polyphylogeny.

Secondly, relationships cannot be demonstrated linearly, except where a few species are involved, since the relationships of existing species take a multi-directional course through divergent evolution; the earliesr products of sequential evolution, usually, though not necessarily, being extinct.

Therefore, faced with the impossible task of demonstrating true relationships in such a list, I feel that the writers of the 'Preliminary Check List of East African Birds', a work which I find extremely useful, were wise to use alphabetical order for all taxa below the order.

However, I think that in cases where we have sufficient data to judge that two or more species have comparatively recently evolved from a common stock, and are more or less allopatric, such species should be grouped into 'superspecies', the name of which would be taken from one of the constituent species, and this would determine the position of this group of species in the alphabetical sequence.

Clive F. Mann,
Box 10,
Kapsabet.

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An informal bird-watching group will meet at the National Museum every Thursday at 5 pm. Sharp, starting on December 3rd. 1970. The aim will be to go 'birding' in interesting areas within Nairobi, such as City Park and Karura Forest, from 5 pm. to sundown. Rainy afternoons may be spent at the Museum. Students will be welcome. If you have any questions or comments, please contact the Secretary, Box 4486, Nairobi. tel. 20141.

SOCIETY FUNCTIONS

Friday, December 11th - Sunday, December 13th: for those who can get the Friday afternoon off, amp at Endosapis (beyond Magadi) led by Mrs J.M. Horne. Meet at the Magadi turn, off the Langata road at 2.30 p.m. Please bring very simple equipment for a rough bivouac the first night in case we do not reach the main camp. In any case we may have to change the plan if the weather is bad, so if you wish to come, please fill in the enclosed slip and let the Secretary have it by December 7th, giving a telephone number where you may be contacted.

Monday, December 14th - Lecture by Mr I.S.C. Parker of Wild Life Services on "Elephant Biology". This will take place in the Ford Foundation Lecture Hall at the National Museum at 5.15 p.m.

January Functions, Date to be announced - Camp on Carnegie Farm, Ngobit.

January 11th - Alan Root's film "Baobab".

SOME RECENT PERIODIC LITERATURE AVAILABLE IN THE LIBRARY

Baxter, R.M. & Urban Emil K.D. On the nature and origins of the feather colouration in the Great White Pelican *Pelecanus onocrotalus roseus* in Ethiopia. *Ibis* 112:336, 1970.

Crowley, T.E. & Pain, T. A monographic revision of the African land snails of the genus *Limicoloria schumacher* (MOLLUSCA - ACHATINIDAE). *Ann. Mus. Roy. Afr. Cent.* No.177, 1970.

Groves, C.P. Population systematics of the gorilla. *J. Zool.* 161:287, 1970.

Hutchison, M. Observations on the growth rate and development of some East African antelopes. *J. Zool.* 161:431, 1970.

Hutchison, M. Artificial rearing of some East African antelopes. *J. Zool.* 161:437, 1970.

Traylor, M.A. Notes on African Muscicapidae. *Ibis* 112:395, 1970.

Verheyen, W.N. & Van der Straeten, E. An annotated bibliography of the African Muridae (Rodentia), *Documentation Zoologique, Tervuren.* No.16, 1970.

Villiers, A. Révision des hémiptères henicocephalidae africains et malgaches. *Ann. Mus. Roy. Afr. Cent.* No.176, 1969.

FORTHCOMING BOOK

We have received details of a book by two members which should be in the shops soon: it is ORCHIDS OF EAST AFRICA by Joyce Stewart and Bob Campbell published by W.H. Allen (London) priced at 6 gns. in the United Kingdom. The book measures 27 x 23 cm and is illustrated with 45 full colour photos and three maps. A full review will appear in due course.

Editor.

NEW BOOKS RECEIVED IN THE LIBRARY

Given by the Authors -

Gillett, J.B. - A numbered check-list of trees, shrubs and noteworthy lianes indigenous to Kenya.

Glover, P.E - A botanical-Kipsigis glossary from Mau-Mara, Kenya.

" - A review of the recent knowledge on the relationship between the Tsetse fly and its vertebrate hosts.

Guggisberg C.A.W. - Mammals of East Africa.

Kock, D. - Die Fledermaus-Fauna des Sudans.

Urban, E.K. - Bibliography of the avifauna of Ethiopia.

Yeoman, G.H. & Walker, J.B. - The ixodid ticks of Tanzania.

Purchased -

Van Someren, V.D. - A bird watcher in Kenya.

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IMPORTANT NOTICE

Although the Annual General Meeting will not be held until March next year, members are asked to send in their nominations for office bearers for the Executive Committee for 1971 as soon as possible.

As far as is known all are standing for re-election except the Hon. Treasurer who will be resigning. Nominations for this office are especially sought.

Please send your nominations to the Hon. Secretary, Box 4486, Nairobi.

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FOR SALE: 1. V.W. Kombi safari (sleeps two) + fitted tent (sleeps four) + full camping & living gear (inc. 'fridge). Tyres excellent engine has only done 30000 miles. Available 1st December 1970.

2. Sunbeam Imp 1966, L.H.D., very good condition, city-driven only. £200 + tax.

FOR BOTH contact Norman Michie, tel. 55066 evenings.

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